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Lys Thr Gln Leu Gln Leu Glu His Leu Leu Leu Asp Leu Gln Met Ile 35 40 45

Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys Leu Thr Arg Met Leu 50 55 60

Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys His Leu 65 70 75 80

Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu Glu Val Leu Asn Leu 85 90 95

Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg Asp Leu Ile Ser Asn 100 105 110

Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met 115 120 125

Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val Glu Phe Leu Asn Arg 130 135 140

Trp Ile Thr Phe Cys Gln Ser Ile Ile Ser Thr Leu Thr Asp Ala His 145 150 155 160

Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe 165 170 175

Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro 180 185 190

Phe Glu Asp His Val Lys Leu Val Asp Glu Val Thr Glu Phe Ala Lys 195 200 205

Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His 210 215 220

Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr 225 230 235 240

Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn 245 250 255

Gln	Asn	Ala	Leu	Leu 565	Val	Arg	Tyr	Thr	Lys 570	Lys	Val	Pro	Gln	Val 575	Ser	
Thr	Pro	Thr	Leu 580	Val	Glu	Val	Ser	Arg 585	Asn	Leu	Gly	Lys	Val 590	Gly	Ser	
Lys	Cys	Cys 595	_	His	Pro	Glu	Ala 600	Lys	Arg	Met	Pro	Cys 605		Glu	Asp	
Tyr	Leu 610	Ser	Val	Val	Leu	Asn 615	Gln	Leu	Суѕ	Val	Leu 620	His	Glu	Lys	Thr	
Pro 625	Val	Ser	Asp	Arg	Val 630		Lys	Cys	Cys	Thr 635	Glu	Ser	Leu	Val	Asn 640	
Arg	Arg	Pro	Cys	Phe 645	Ser	Ala	Leu	Glu	<b>Val</b> 650	Asp	Glu	Thr	Tyr	Val 655	Pro	
Lys	Glu	Phe	Asn 660	Ala	Glu	Thr	Phe	Thr 665	Phe	His	Ala	Asp	Ile 670	Cys	Thr	
Leu	Ser	G1u 675	Lys	Glu	Arg	Gln	Ile 680	Lys	Lys	Gln	Thr	Ala 685	Leu	Val	Glu	
Leu	Val 690	Lys	His	Lys	Pro	Lys 695	Ala	Thr	Lys	Glu	Gln 700	Leu	Lys	Ala	Val	
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Gln Leu Glu His Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile 35 40 45

Asn Asn Tyr Lys Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe 50 55 60

Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu 65 70 75 80

Glu Glu Leu Lys Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys 85 90 95

Asn Phe His Leu Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile
100 105 110

Val Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala 115 120 125

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Cys Gln Ser Ile Ile Ser Thr Leu Thr 145 150

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His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu 35 40 45

Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val 50 55 60

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp 65 70 75 80

Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp 85 90 95

Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala 100 105 110

Asp	Cys	Cys 115	Ala	Lys	Gln	Glu	Pro 120	Glu	Arg	Asn	Glu	Cys 125	Phe	Leu	Gln
His	Lys 130	Asp	Asp	Asn	Pro	Asn 135	Leu	Pro	Arg	Leu	Val 140	Arg	Pro	Glu	Val
Asp 145	Val	Met	Cys	Thr	Ala 150	Phe	His	Asp	Asn	Glu 155	Glu	Thr	Phe	Leu	Lys 160
Lys	Tyr	Leu	Tyr	Glu 165	Ile	Ala	Arg	Arg	His 170	Pro	Tyr	Phe	Tyr	Ala 175	Pro
Glu	Leu	Leu	Phe 180	Phe	Ala	Lys	Arg	Tyr 185	Lys	Ala	Ala	Phe	Thr 190	Glu	Cys
Суѕ	Gln	Ala 195	Ala	Asp	Lys	Ala	Ala 200	Суѕ	Leu	Leu	Pro	Lys 205	Leu	Asp	Glu
Leu	Arg 210	Asp	Glu	Gly	Lys	Ala 215	Ser	Ser	Ala	Lys	Gln 220	Arg	Leu	Lys	Cys
Ala 225	Ser	Leu	Gln	Lys	Phe 230	Gly	Glu	Arg	Ala	Phe 235	Lys	Ala	Trp	Ala	Val 240
Ala	Arg	Leu	Ser	Gln 245	Arg	Phe	Pro	Lys	Ala 250	Glu	Phe	Ala	Glu	Val 255	Ser
Lys	Leu	Val	Thr 260	Asp	Leu	Thr	Lys	Val 265	His	Thr	Glu	Cys	Cys 270	His	Gly
Asp	Leu	Leu 275	Glu	Cys	Ala	Asp	Asp 280	Arg	Ala	Asp	Leu	Ala 285	Lys	Tyr	Ile
Cys	Glu 290	Asn	Gln	Asp	Ser	Ile 295	Ser	Ser	Lys	Leu	Lys 300	Glu	Суѕ	Cys	Glu
Lys 305	Pro	Leu	Leu	Glu	Lys 310	Ser	His	Суѕ	Ile	Ala 315	Glu	Val	Glu	Asn	Asp 320
Glu	Met	Pro	Ala	Asp 325	Leu	Pro	Ser	Leu	Ala 330	Ala	Asp	Phe	Val	Glu 335	Ser
Lys	Asp	Val	Cys 340	Lys	Asn	Tyr	Ala	Glu 345	Ala	Lys	Asp	Val	Phe 350	Leu	Gly
Met	Phe	Leu 355	Tyr	Glu	Tyr	Ala	Arg 360	Arg	His	Pro	Asp	Tyr 365	Ser	Val	Val
Leu	Leu 370	Leu	Arg	Leu	Ala	Lys 375	Thr	Tyr	Glu	Thr	Thr 380	Leu	Glu	Lys	Суз
Cys 385	Ala	Ala	Ala	Asp	Pro 390	His	Glu	Суѕ	Tyr	Ala 395	Lys	Val	Phe	-	Glu 400
Phe	Lys	Pro	Leu	Val 405	Glu	Glu	Pro	Gln	Asn 410	Leu	Ile	Lys	Gln	Asn 415	Cys

Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg 485 490 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 505 Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 520 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 535 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 550 555 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 570 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 585 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu 615 His Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr 705 715 ·710

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Cys Gln Ser Ile Ile Ser Thr Leu Thr

150

145

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Val Thr Asn Ser Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu 20 25 30

Gln Leu Glu His Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile 35 40 45

Asn Asn Tyr Lys Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe 50 60

Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu 65 70 75 80

Glu Glu Leu Lys Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys 85 90 95

Asn Phe His Leu Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile
100 105 110

Val Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala 115 120 125

Asp Glu Thr Ala Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe 130 135 140

Cys Gln Ser Ile Ile Ser Thr Leu Thr Asp Ala His Lys Ser Glu Val 145 150 155 160

Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val 165 170 175

Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His
180 185 190

Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala 195 200 205

Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly 210 215 220

Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met 225 230 235 240

Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu 245 250 255

Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu 260 265 270

Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu 280 Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys 345 Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His 395 Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr 405 Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys 425 Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu 455 460 Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu 470 475 Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val 485 490 Val Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp 520 Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu 550

Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu

565

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Gln Leu Glu His Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile 35 40 45

Asn Asn Tyr Lys Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe 50 60

Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu 65 70 75 80

Glu Glu Leu Lys Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys 85 90 95

Asn Phe His Leu Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile 100 105 110

Val Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala 115 120 125

Asp Glu Thr Ala Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe 130 . 135 140

Ser Gln Ser Ile Ile Ser Thr Leu Thr 145

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Val Thr Asn Ser Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu 20 25 30

Gln Leu Glu His Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile 35 45

Asn Asn Tyr Lys Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe 50 55 60

Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu 65 70 75 80

Glu Glu Leu Lys Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys 85 90 95

Asn Phe His Leu Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile 100 105 110

Val Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala 115 120 125

Asp	Glu 130	Thr	Ala	Thr	Ile	Val 135	Glu	Phe	Leu	Asn	Arg 140	Trp	Ile	Thr	Phe
Cys 145	Gln	Ser	Ile	Ile	Ser 150	Thr	Leu	Thr	Asp	Ala 155	His	Lys	Ser	Glu	Val 160
Ala	His	Arg	Phe	Lys 165	Asp	Leu	Gly	Glu	Glu 170	Asn	Phe	Lys	Ala	Leu 175	Val
Leu	Ile	Ala	Phe 180	Ala	Gln	Tyr	Leu	Gln 185	Gln	Cys	Pro	Phe	Glu 190	Asp	His
Val	Lys	Leu 195	Val	Asn	Glu	Val	Thr 200	Glu	Phe	Ala	Lys	Thr 205	Cys	Va1	Ala
Asp	Glu 210	Ser	Ala	Glu	Asn	Cys 215	Asp	Lys	Ser	Leu	His 220	Thr	Leu	Phe	Gly
Asp 225	Lys	Leu	Cys	Thr	Val 230	Ala	Thr	Leu	Arg	Glu 235	Thr	Tyr	Gly	Glu	Met 240
Ala	Asp	Cys	Cys	Ala 245	Lys	Gln	Glu	Pro	Glu 250	Arg	Asn	Glu	Cys	Phe 255	Leu
Gln	His	Lys	Asp 260	Asp	Asn	Pro	Asn	Leu 265	Pro	Arg	Leu	Val	Arg 270	Pro	Glu
Val	Asp	Val 275	Met	Суѕ	Thr	Ala	Phe 280	His	Asp	Asn	G1u	Glu 285	Thr	Phe	Leu
Lys	Lys 290	Tyr	Leu	Tyr	Glu	Ile 295	Ala	Arg	Arg	His	Pro 300	Tyr	Phe	Tyr	Ala
Pro 305	Glu	Leu	Leu	Phe	Phe 310	Ala	Lys	Arg	Tyr	Lys 315	Ala	Ala	Phe	Thr	Glu 320
Cys	Cys	Gln	Ala	Ala 325	Asp	Lys	Ala	Ala	Суs 330	Leu	Leu	Pro	Lys	Leu 335	Asp
Glu	Leu	Arg	Asp 340	Glu	Gly	Lys	Ala	Ser 345	Ser	Ala	Lys	Gln	Arg 350	Leu	Lys
Суз	Ala	Ser 355	Leu	Gln	Lys	Phe	Gly 360	Glu	Arg	Ala	Phe	Lys 365	Ala	Trp	Ala
Val	Ala 370	Arg	Leu	Ser	Gln	Arg 375	Phe	Pro	Lys	Ala	Glu 380	Phe	Ala	Glu	Val
Ser 385	Lys	Leu	Va1	Thr	Asp 390	Leu	Thr	Lys	Val	His 395	Thr	Glu	Суѕ	Cys	His 400
Gly	Asp	Leu	Leu	Glu 405	Суѕ	Ala	Asp	Asp	Arg 410	Ala	Asp	Leu	Ala	Lys 415	Tyr
Ile	Суѕ	Glu	Asn 420	Gln	Asp	Ser	Ile	Ser 425	Ser	Lys	Leu	Ĺys	Glu 430	Суѕ	Суѕ

Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn 435 440 445

Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu
450 455 460

Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu 465 470 475 480

Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val 485 490 495

Val Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys 500 505 510

Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp 515 520 525

Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn 530 535 540

Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu .545 550 555 560

Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu 565 570 575

Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys 580 585 590

His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val 595 600 605

Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp 610 620

Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys 625 630 635 640

Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn 645 650 655

Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys
660 665 670

Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His
675 680 685

Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe 690 695 700

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Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu 725 730 735

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                                                                      300
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Gln Leu Glu His Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile
Asn Asn Tyr Lys Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe
Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu
Glu Glu Leu Lys Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys
Asn Phe His Leu Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile
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Val Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala
Asp Glu Thr Ala Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe
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Ser Gln Ser Ile Ile Ser Thr Leu Thr
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Lys	Thr	Gln 35	Leu	Gln	Leu	Glu	His 40	Leu	Leu	Leu	Asp	Leu 45	Gln	Met	Ile
Leu	Asn 50	Gly	Ile	Asn	Asn	Tyr 55	Lys	Asn	Pro	Lys	Leu 60	Thr	Arg	Met	Leu
Thr 65	Phe	Lys	Phe	Tyr	Met 70	Pro	Lys	Lys	Ala	Thr 75	Glu	Leu	Lys	His	Leu 80
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Ala	Gln	Ser	Lys 100	Asn	Phe	His	Leu	Arg 105	Pro	Arg	Asp	Leu	Ile 110	Ser	Asn
Ile	Asn	Val 115	Ile	Val	Leu	Glu	Leu 120	Lys	Gly	Ser	Glu	Thr 125	Thr	Phe	Met
Cys	Glu 130	Tyr	Ala	Asp	Glu	Thr 135	Ala	Thr	Ile	Val	Glu 140	Phe	Leu	Asn	Arg
Trp 145	Ile	Thr	Phe	Суѕ	Gln 150	Ser	Ile	Ile	Ser	Thr 155	Leu	Thr	Asp	Ala	His 160
Lys	Ser	Glu	Val	Ala 165	His	Arg	Phe	Lys	Asp 170	Leu	Gly	Glu	Glu	Asn 175	Phe
Lys	Ala	Leu	Val 180	Leu	Ile	Ala	Phe	Ala 185	Gln	Tyr	Leu	Gln	Gln 190	Cys	Pro
Phe	Glu	Asp 195	His	Val	Lys	Leu	Val 200	Asn	Glu	Val	Thr	Glu 205	Phe	Ala	Lys
Thr	Cys 210	Val	Ala	Asp	Glu	Ser 215	Ala	Glu	Asn	Cys	Asp 220	Lys	Ser	Leu	His
Thr 225	Leu	Phe	Gly	Asp	Lys 230	Leu	Cys	Thr	Val	Ala 235	Thr	Leu	Arg	Glu	Thr 240
Туг	Gly	Glu	Met	Ala 245	Asp	Cys	Cys	Ala	Lys 250	Gln	Glu	Pro	Glu	Arg 255	Asn
Glu	Cys	Phe	Leu 260	Gln	His	Lys	Asp	Asp 265	Asn	Pro	Asn	Leu	Pro 270	Arg	Leu
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Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro

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Pro	Lys	Leu	Asp 340	Glu	Leu	Arg	Asp	Glu 345	Gly	Lys	Ala	Ser	Ser 350	Ala	Lys
G1n	Arg	Leu 355	Lys	Cys	Ala	Ser	Leu 360	Gln	Lys	Phe	Gly	Glu 365	Arg	Ala	Phe
Lys	Ala 370	Trp	Ala	Val	Ala	Arg 375	Leu	Ser	Gln	Arg	Phe 380	Pro	Lys	Ala	Glu
Phe 385	Ala	Glu	Val	Ser	Lys 390	Leu	Val	Thr	Asp	Leu 395	Thr	Lys	Val	His	Thr 400
Glu	Cys	Cys	His	Gly 405	Asp	Leu	Leu	Glu	Cys 410	Ala	Asp	Asp	Arg	Ala 415	Asp
Leu	Ala	Lys	Tyr 420	Ile	Cys	Glu	Asn	Gln 425	Asp	Ser	Ile	Ser	Ser 430	Lys	Leu
Lys	Glu	Cys 435	Cys	Glu	Lys	Pro	Leu 440	Leu	Glu	Lys	Ser	His 445	Cys	Ile	Ala
Glu	Val 450	Glu	Asn	Asp	Glu	Met 455	Pro	Ala	Asp	Leu	Pro 460	Ser	Leu	Ala	Ala
Asp 465	Phe	Val	Glu	Ser	Lys 470	Asp	Val	Cys	Lys	Asn 475	Tyr	Ala	Glu	Ala	Lys 480
Asp	Val	Phe	Leu	Gly 485	Met	Phe	Leu	Tyr	Glu 490	Tyr	Ala	Arg	Arg	His 495	Pro
Asp	Tyr	Ser	<b>Val</b> 500	Val	Leu	Leu	Leu	Arg 505	Leu	Ala	Lys	Thr	Tyr 510	Glu	Thr
Thr	Leu	Glu 515	Lys	Cys	Cys	Ala	Ala 520	Ala	Asp	Pro	His	Glu 525	Cys	Tyr	Ala
Lys	Val 530	Phe	Asp	Glu	Phe	Lys 535	Pro	Leu	Val	Glu	Glu 540	Pro	Gln	Asn	Leu
Ile 545	Lys	Gln	Asn	Суs	Glu 550	Leu	Phe	Glu	Gln	Leu 555	Gly	Glu	Tyr	Lys	Phe 560
Gln	Asn	Ala	Leu	Leu 565	Val	Arg	Tyr	Thr	Lys 570	Lys	Val	Pro	Gln	<b>Val</b> 575	Ser
Thr	Pro	Thr	Leu 580	Val	Glu	Val	Ser	Arg 585	Asn	Leu	Gly		Val 590	Gly	Ser
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Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu

Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro

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Pro	Lys	Leu	Asp 340	Glu	Leu	Arg	Asp	Glu 345	Gly	Lys	Ala	Ser	Ser 350	Ala	Ľýs
Gln	Arg	Leu 355	Lys	Cys	Ala	Ser	Leu 360	Gln	Lys	Phe	Gly	Glu 365	Arg	Ala	Phe
Lys	Ala 370	Trp	Ala	Val	Ala	Arg 375	Leu	Ser	Gln	Arg	Phe 380	Pro	Lys	Ala	Glu
Phe 385	Ala	Glu	Val	Ser	Lys 390	Leu	Val	Thr	Asp	Leu 395	Thr	Lys	Val	His	Thr 400
Glu	Cys	Cys	His	Gly 405	Asp	Leu	Leu	Glu	Cys 410	Ala	Asp	Asp	Arg	Ala 415	Asp
Leu	Ala	Lys	Tyr 420	Ile	Cys	Glu	Asn	Gln 425	Asp	Ser	Ile	Ser	Ser 430	Lys	Leu
Lys	Glu	Cys 435	Cys	Glu	Lys	Pro	Leu 440	Leu	Glu	Lys	Ser	His 445	Cys	Ile	Ala
Glu	Val 450	Glu	Asn	Asp	Glu	Met 455	Pro	Ala	Asp	Leu	Pro 460	Ser	Leu	Ala	Ala
Asp 465	Phe	Val	Glu	Ser	Lys 470	Asp	Val	Cys	Lys	Asn 475	Tyr	Ala	Glu	Ala	Lys 480
Asp	Val	Phe	Leu	Gly 485	Met	Phe	Leu	Tyr	Glu 490	Tyr	Ala	Arg	Arg	His 495	Pro
Asp	Tyr	Ser	Val 500	Val	Leu	Leu	Leu	Arg 505	Leu	Ala	Lys	Thr	Tyr 510	Glu	Thr
Thr	Leu	Glu 515	Lys	Cys	Суѕ	Ala	Ala 520	Ala	Asp	Pro	His	Glu 525	Суѕ	Tyr	Ala
Lys	Val 530	Phe	Asp	Glu	Phe	Lys 535	Pro	Leu	Val	Glu	Glu 540	Pro	Gln	Asn	Leu
Ile 545	Lys	Gln	Asn	Суѕ	Glu 550	Leu	Phe	Glu	Gln	Leu 555	Gly	Glu	Tyr	Lys	Phe 560
Gln	Asn	Ala	Leu	Leu 565	Val	Arg	Tyr	Thr	Lys 570	Lys	Val	Pro	Gln	Val 575	Ser
Thr	Pro	Thr	Leu 580	Val	Glu	Val	Ser	Arg 585	Asn	Leu	Gly		Val 590	Gly	Ser
Lys	Cys	Cys	Lys	His	Pro	Glu	Ala	Lys	Arg	Met	Pro	Cys	Ala	Glu	Asp

	٠	595					600					605				
Tyr	Leu 610	Ser	Val	Val	Leu	Asn 615	Gln	Leu	Cys	Val	Leu 620	His	Glu	Lys	Thr	
Pro 625	Val	Ser	Asp	Arg	Val 630		Lys	Cys	Cys	Thr 635	Glu	Ser	Leu	Val	Asn 640	
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Lys	Glu	Phe	Asn 660	Ala	Glu	Thr	Phe	Thr 665	Phe	His	Ala	Asp	Ile 670	Cys	Thr	
Leu.	Ser	Glu 675	Lys	Glu	Arg	Gln	Ile 680	Lys	Lys	Gln	Thr	Ala 685	Leu	Val	Glu	
Leu	Val 690	Lys	His	Lys	Pro	Lys 695	Ala	Thr	Lys	Glu	Gln 700	Leu	Lys	Ala	Val	
Met 705	Asp	Asp	Phe	Ala	Ala 710	Phe	Val	Glu	Lys	Cys 715	Cys	Lys	Ala	Asp	Asp 720	·
Lys	Glu	Thr	Cys	Phe 725	Ala	Glu	Glu	Gly	Lys 730	Lys	Leu	Val	Ala	Ala 735	Ser	
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Val	Thr	Asn	Ser 20	Ala	Pro	Thr	Ser	Ser .25	Ser	Thr	Lys	Lys	Thr 30	Gln	Leu	
Gln	Leu	Glu	His	Leu	Leu	Leu	Asp	Leu	Gln	Met	Ile	Leu	Asn	Gly	Ile	

5 40 49

Asn Asn Tyr Lys Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe 50 60

Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu 65 70 75 80

Glu Glu Leu Lys Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys 85 90 95

Asn Phe His Leu Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile
100 105 110

Val Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala 115 120 125

Asp Glu Thr Ala Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe 130 135 140

Cys Gln Ser Ile Ile Ser Thr Leu Thr 145 150

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His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu 35, 40 45

Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
50 55 60

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp 65 70 75 80

Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp 85 90 95

Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala 100 105 110

Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln 115 120 125

His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
130 135 140

Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys

155 160 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser 245 250 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly 265 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile 280 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu 295 Lys Pro Leu Clu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp 310 315 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser 325 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly 345 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys 375 Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu 425 Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His

450	455	460

Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val 465 470 480

Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
485 490 495

Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 500 505 510

Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala  $_{\scriptsize \setminus}$  515 520 525

Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 530 535 540

Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 545 550 560

Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 570 575

Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 580 585 590

Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly 595 600 605

Leu Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu 610 615 620

His Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr 625 630 635 640

Lys Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro 645 655

Lys Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Leu 660 665 670

Lys Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His 675 680 685

Leu Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu 690 700

Leu Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr 705 710 715 720

Ala Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Cys Gln Ser 725 730 735

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360

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ttgcaaatga tcttaaacgg tataaacaac tataaaaacc caaagttgac tagaatgttg
actttcaagt tctacatgcc aaagaaagct actgaattga agcacttgca atgtttggaa
gaagaattga agccattgga agaagttttg aacttggctc aatctaagaa cttccacttg
agaccaagag atttgatttc taacattaac gttattgttt tggaattgaa gggttctgaa
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Val Thr Asn Ser Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu
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                                 25
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Asn Asn Tyr Lys Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe
Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu
Glu Glu Leu Lys Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys:
Asn Phe His Leu Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile
Val Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala
Asp Glu Thr Ala Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe
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His	Arg	Phe 35	Lys	Asp	Leu	Gly	Glu 40	Glu	Asn	Phe	Lys	Ala 45	Leu	Val	Leu		
Ile	Ala 50	Phe	Ala	Gln	Tyr	Leu 55	Gln	Gln	Cys	Pro	Phe 60	Glu	Asp	His	Val		
Lys 65	Leu	Val	Asn	Glu	Val 70	Thr	Glu	Phe	Ala	Lys 75	Thr	Cys	Val	Ala	Asp 80		
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Lys	Leu	Cys	Thr 100	Val	Ala	Thr	Leu	Arg 105	Glu	Thr	Tyr	Gly	Glu 110	Met	Ala		
Asp	Cys	Cys 115	Ala	Lys	Gln	Glu	Pro 120	Glu	Arg	Asn	Glu	Cys 125	Phe	Leu	Gln		
His	Lys 130	Asp	Àsp	Asn	Pro	Asn 135	Leu	Pro	Arg	Leu	Val 140	Arg	Pro	Glu	Val		

145	vai	met	Cys	Thr	150	rne	HIS	Asp	ASII	155	GIU	1111	FIIE	Deu	160
Lys	Tyr	Leu		Glu 165	Ile	Ala	Arg	Arg	His 170	Pro	Tyr	Phe	Tyr	Ala 175	Pro
Glu	Leu	Leu	Phe 180	Phe	Ala	Lys	Arg	Tyr 185	Lys	Ala	Ala	Phe	Thr 190	Glu	Cys
Cys	Gln	Ala 195	Ala	Asp	Lys	Ala	Ala 200	Cys	Leu	Leu	Pro	Lys 205	Leu	Asp	Glu
Leu	Arg 210	Asp	Glu	Gly	Lys	Ala 215	Ser	Ser	Ala	Lys	Gln 220	Arg	Leu	Lys	Суз
Ala 225	Ser	Leu	Gln	Lys	Phe 230	Gly	Glu	Arg	Ala	Phe 235	Lys	Ala	Trp	Ala	Val 240
Ala	Arg	Leu	Ser	Gln 245	Arg	Phe	Pro	Lys	Ala 250	Glu	Phe	Ala	Glu	Val 255	Ser
Lys	Leu	Va1	Thr 260		Leu	Thr	Lys	Val 265	His	Thr	Glu	Cys	Cys 270	His	Gly
Asp	Leu	Leu 275	Glu	Cys	Ala	Asp	Asp 280	Arg	Ala	Asp	Leu	Ala 285	Lys	Tyr	Ile
Cys	Glu 290	Asn	Gln	Asp	Ser	Ile 295	Ser	Ser	Lys	Leu	Lys 300	Glu	Cys	Суз	Glu
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Glu	Met	Pro	Ala	Asp 325	Leu	Pro	Ser	Leu	Ala 330	Ala	Asp	Phe	Val	Glu 335	Ser
Lys	Asp	Val	Cys 340	Lys	Asn	Tyr	Ala	Glu 345	Ala	Lys	Asp	Val	Phe 350	Leu	Gly
Met	Phe	Leu 355		Glu	Tyr	Ala	Arg 360	Arg	His	Pro	Asp	Tyr 365	Ser	Val	Val
Leu	Leu 370		Arg	Leu	Ala	Lys 375		Tyr	Glu	Thr	Thr 380	Leu	Glu	Lys	Cys
Cys 385	Ala	Ala				His						Val	Phe	Asp	Glu 400
Phe	Lys	Pro	Leu	Val 405		Glu	Pro	Gln	Asn 410		Ile	Lys	Gln	Asn 415	Суѕ
Glu	Leu	Phe	Glu <b>4</b> 20	Gln	Leu	Gly	Glu	Tyr 425	_	Phe	Gln	Asn	Ala 430	Leu	Leu
Val	Arg	Tyr 435		Lys	Lys	Val	Pro 440	Gln	Val	Ser	Thr	Pro 445		Leu	Val

Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His 450 455 460

Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val 465 470 475 480

Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg 485 490 495

Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 500 505 510

Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 515 520 525

Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 530 535 540

Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 545 550 555 560

Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 570 575

Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 580 585 590

Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly 595 600 605

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Ala Ala Pro Arg Pro Ala Leu Arg Ala Gln Arg Ala Gly Pro Ala Gly
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Pro Gly Ala Lys Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys
50 55 60

Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala

65					70					75					80
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Glu	Val	Thr	Glu 100	Phe	Ala	Lys	Thr	Cys 105	Val	Ala	Asp	Glu	Ser 110	Ala	Glu
Asn	Cys	Asp 115	Lys	Ser	Leu	His	Thr 120	Leu	Phe	Gly	Asp	Lys 125	Leu	Cys	Thr
Val	Ala 130	Thr	Leu	Arg	Glu	Thr 135	Tyr	Gly	Glu	Met	Ala 140	Asp	Cys	Суѕ	Ala
Lys 145	Gln	Ğlu	Pro	Glu	Arg 150	Asn	Glu	Cys	Phe	Leu 155	Gln	His	Lys	Asp	Asp 160
Asn	Pro	Asn	Leu	Pro 165	Arg	Leu	Val	Arg	Pro 170	Glu	Val	Asp	Val	Met 175	Cys
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Cys 305	Ala	Asp	Asp	Arg	Ala 310	Asp	Leu	Ala	Lys	Tyr 315	Ile	Cys	Glu	Asn	Gln 320
Asp	Ser	Ile	Ser	Ser 325		Leu	Lys	Glu	Cys 330		Glu	Lys	Pro	Leu 335	Leu
Glu	Lys	Ser	His 340	Cys	Ile	Ala	Glu	Val 345	Glu	Asn	Asp	Glu	Met 350	Pro	Ala
Asp	Leu	Pro 355		Leu	Ala	Ala	Asp 360	Phe	Val	Glu	Ser	Lys 365	Asp	Val	Cys
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Lys 65	Leu	Val	Asn	Glu	Val 70	Thr	Glu	Phe	Ala	Lys 75	Thr	Cys	Val	Ala	Asp 80
Glu	Ser	Ala	Glu	Asn 85	Cys	Asp	Lys	Ser	Leu 90	His	Thr	Leu	Phe	Gly 95	Asp
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Lys	Tyr	Leu	Tyr	Glu 165	Ile	Ala	Arg	Arg	His 170	Pro	Tyr	Phe	Tyr	Ala 175	Pro
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Lys	Leu	Val	Thr 260	Asp	Leu	Thr	Lys	Val 265	His	Thr	Glu	Суѕ	Cys 270	His	Gly
Asp	Leu	Leu 275	Glu	Cys	Ala	Asp	Asp 280	Arg	Ala	Asp	Leu	Ala 285	Lys	Tyr	Ile
Cys	Glu	Asn	Gln	Asp	Ser	Ile	Ser	Ser	Lys	Leu	Lys	Glu	Cys	Cys	Glu

- Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp 305 310 315 320
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- Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys 370 375 380
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- Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val 435 440 445
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- Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val 465 470 475 480
- Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
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<211> 638

<212> PRT

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Pro Gly Ala Lys Gly Asp Ala His Lys Ser Glu Val Ala His Arg Phe 50 55 60

Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe 65 70 75 80

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Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp 85 90 95

Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala 100 105 110

Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln 115 120 125

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Cys	Gln	Ala 195	Ala ·	Asp	Lys	Ala	Ala 200	Суѕ	Leu	Leu	Pro	Lys 205	Leu	Asp	Glu
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			420					425					430	•	Leu
		435					440		-			445			Val
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- Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln 225 230 235 240
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- Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu 290 295 300
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Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr 485 490 495

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Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu 545 550 555 560

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Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met 580 585 590

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<213> Homo sapiens

<400> 568

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Arg Ala Pro Pro

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International Bureau





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**PCT** 

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- (72) Inventors; and
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- (74) Agents: HOOVER?, Kenley, K.? et al.; 14200 Shady Grove Road, Rockville, MD 20850 (US).

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- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Published:

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- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ALBUMIN FUSION PROTEINS

(57) Abstract: The present invention encompasses albumin fusion proteins. Nucleic acid molecules encoding the albumin fusion proteins of the invention are also encompassed by the invention, as are vectors containing these nucleic acids, host cells transformed with these nucleic acids vectors, and methods of making the albumin fusion proteins of the invention and using these nucleic acids, vectors, and/or host cells. Additionally the present invention encompasses pharmaceutical compositions comprising albumin fusion proteins and methods of treating, preventing, or ameliorating diseases, disordrs or conditions using albumin fusion proteins of the invention.





## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/01369

IPC(7) US CL	SIFICATION OF SUBJECT MATTER  : A61 K 38/38; C07 H 21/04; C07 K 14/765; C  : 536/23.5; 435/320.1, 325,69.7; 530/363	•	
	International Patent Classification (IPC) or to both n	ational classification and IPC	
Minimum do	DS SEARCHED  cumentation searched (classification system followed 36/23.5; 435/320.1, 325,69.7; 530/363	by classification symbols)	
0.3. : 3.	30/23.3; 433/320.1, 323,03.7, 330/303	•	
Documentation	on searched other than minimum documentation to th	e extent that such documents are include	d in the fields searched
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	nta base consulted during the international search (nar ontinuation Sheet	ne of data base and, where practicable, s	earch terms used)
C. DOCT	UMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where a		Relevant to claim No.
X	US 5,766,883 B (BALLANCE LL et al) 16 June SEQ.ID.NO:14		1-12 and 26
x	WO 02-97038 A2(BELL et al) 05 December, 2002 SEQ.ID.NO:7	(05.12,2002), especially	1-12 and 26
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Furthe	r documents are listed in the continuation of Box C.	See patent family annex.	
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"A" documen be of par	it defining the general state of the art which is not considered to ricular relevance	understand the principle or theory u  "X" document of particular relevance; th	nderlying the invention
"E" earlier ap	pplication or patent published on or after the international filing	considered novel or cannot be consi step when the document is taken alo	dered to involve an inventive
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l .	it referring to an oral disclosure, use, exhibition or other means it published prior to the international filing date but later than the	"&" document member of the same pater	ı family
l nriority	date claimed actual completion of the international search	Date of mailing of the international sea	rch report
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Ma Co	il Stop PCT, Atm: ISA/US mmissioner for Patents	Padmavathi V Baskar USOU	-downsta
Alc	D. Box 1450 exandria, Virginia 223 13-1450 o. (703) 872-9306	Telephone No. 571-272-1600	

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INTERNATIONAL SEARCH REPORT	International application No. PCT/US04/01369
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Continuation of B. FIELDS SEARCHED Item 3: MEDLINE, STN, A -GENSEQ, N-GENSEQ, EST, DERWENT, SWISS-PRO	OT. PIR. USPTOWEST, SWISSSPTREMBL.
GENEMBEL, PUBLISHED APPLICATIONS AND ISSUED PATENTS	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
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- Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu 165 170 175
- Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu 180 185 190
- Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala 195 200 205
- Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu 210 215 220
- Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp 225 230 230 235
- Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys 245 250 255
- Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala 260 265 270
- Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val 275 280 285
- Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His 290 295 300
- Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr 305 310 315 320
- Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys 325 330 335
- Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn 340 345 350
- Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu 355 360 365
- Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu 370 380
- Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val 385 390 395 400
- Val Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys
  405 410 415
- Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp 420 425 430
- Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn 435 440 445
- Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu 450 455 460

Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu 470 475 Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys 485 His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val 505 Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp 520 Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn 555 Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys 570 Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe 600 Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu <210> 234 <211> 630 <212> PRT <213> Homo sapiens

Lys 65	Ala	Leu	Val	Leu	Ile 70	Ala	Phe	Ala	Gln	<b>Tyr</b> 75	Leu	Gln	Gln	Cys	Pro 80
Phe	Glu	Asp	His	Val 85	Lys	Leu	Val	Asn	.Glu 90	Val	Thr	Glu	Phe	Ala 95	
Thr	Cys	Val	Ala 100	Asp	Glu	Ser	Ala	Glu 105	Asn	Суѕ	Asp	Lys	Ser 110	Leu	His
Thr	Leu	Phe 115	Gly	Asp	Lys	Leu	Cys 120	Thr	Val	Ala	Thr	Leu 125	Arg	Glu	Thr
Tyr	Gly 130	Glu	Met	Ala	Asp	Cys 135	Cys	Ala	Lys	Gln	Glu 140	Pro	Glu	Arg	Asn
Glu 145	Cys	Phe	Leu	Gln	His 150	Lys	Asp	Asp	Asn	Pro 155	Asn	Leu	Pro	Arg	Leu 160
Val	Arg	Pro	Glu	Val 165	Asp	Val	Met	Суѕ	Thr 170	Ala	Phe	His	Asp	Asn 175	Glu
Glu	Thr	Phe	Leu 180	Lys	Lys	Туr	Leu	Туг 185	Glu	Ile	Ala	Arg	Arg 190	His	Pro
Tyr	Phe	Туг 195	Ala	Pro	Glu	Leu	Leu 200	Phe	Phe	Ala	Lys	Arg 205	Tyr	Lys	Ala
Ala	Phe 210	Thr	Glu	Суз	Cys	Gln 215	Ala	Ala	Asp	Lys	Ala 220	Ala	Cys	Leu	Leu
Pro 225	Lys	Leu	Asp	Glu	Leu 230	Arg	Asp	Glu	Gly	Lys 235	Ala	Ser	Ser	Ala	Lys 240
Gln	Arg	Leu	Lys	Cys 245	Ala	Ser	Leu	Gln	Lys 250	Phe	Gly	Glu	Arg	Ala 255	Phe
Lys	Ala	Trp	Ala 260	Val	Ala	Arg	Leu	Ser 265	Gln	Arg	Phe	Pro	Lys 270	Ala	Glu
Phe	Ala	Glu 275	Val	Ser	Lys	Leu	Val 280	Thr	Asp	Leu	Thr	Lys 285	Val	His	Thr
Glu	Суs 290	Суѕ	His	Gly	Asp	Leu 295	Leu	Glu	Ćys	Ala	Asp 300	Asp	Arg	Ala	Asp
Leu 305	Ala	Lys	Tyr	Ile	Cys 310	Glu	Asn	Gln	Asp	Ser 315	Ile	Ser	Ser	Lys	Leu 320
Lys	Glu	Cys	Cys	Glu 325	Lys	Pro	Leu	Leu	Glu 330	Lys	Ser	His	Суѕ	11e 335	Ala
Glu	Val	Glu	Asn 340	Asp	Glu	Met	Pro	Ala 345	Asp	Leu	Pro	Ser	Leu 350	Ala	Ala
Asp	Phe	Val 355	Glu	Ser	Lys	Asp	Va1 360	Cys	Lys	Asn	Tyr	Ala 365	Glu	Ala	Lys

Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro  $370 \hspace{1cm} 375 \hspace{1cm} 380$ 

Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr 385 390 395 400

Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala 405 410 415

Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu 420 425 430

Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe
435 440 445

Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser 450 455 460

Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser 465 470 475 480

Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp 485 490 495

Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr 500 505 510

Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn 515 520 525

Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro 530 540

Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr 545 550 555 556

Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu 565 570 575

Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val 580 585 590

Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp 595 600 605

Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser 610 615 620

Gln Ala Ala Leu Gly Leu 625 630

<210> 235

<211> 631

<212> PRT

<213> Homo sapiens

Met Leu Leu Gln Ala Phe Leu Phe Leu Leu Ala Gly Phe Ala Ala Lys Ile Ser Ala Ser Pro Lys Met Val Gln Gly Ser Gly Cys Phe Gly Arg Lys Met Asp Arg Ile Ser Ser Ser Gly Leu Gly Cys Lys Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn 55 Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu 105 His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala 250 Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala 265 Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala

<400> 235

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	Asp 305	Leu	Ala	Lys	Tyr	Ile 310	Cys	Glu	Asn	Gln	Asp 315		Ile	Ser	Ser	Lys 320
	Leu	Lys	Glu	Cys	Cys 325	Glu	Lys	Pro	Leu	Leu 330	Glu	Lys	Ser	His	Суs 335	Ile
	Ala	Glu	Val	Glu 340	Asn	Asp	Glu	Met	Pro 345	Ala	Asp	Leu	Pro	Ser 350	Leu	Ala
	Ala	Asp	Phe 355	Val	Glu	Ser	Lys	Asp 360	Val	Cys	Lys	Asn	Tyr 365	Ala	Glu	Ala
	Lys	Asp 370	Val	Phe	Leu	Gly	Met 375	Phe	Leu	Tyr	Glu	<b>Tyr</b> 380	Ala	Arg	Arg	His
	Pro 385	Asp	Tyr	Ser	Val	Val 390	Leu	Leu	Leu	Arg	Leu 395	Ala	Lys	Thr	Tyr	Glu 400
	Thr	Thr	Leu	Glu	Lys 405	Cys	Суѕ	Ala	Ala	Ala 410	Asp	Pro	His	Glu	Cys 415	Tyr
	Ala	Lys	Val	Phe 420	Asp	Glu	Phe	Lys	Pro 425	Leu	Val	Glu	Glu	Pro 430	Glņ	Asn
	Leu	Ile	Lys 435	Gln	Asn	Cys	G1u	Leu 440	Phe	Glu	Gln	Leu	Gly 445	Glu	Tyr	Lys
	Phe	Gln 450	Asn	Ala	Leu	Leu	Val 455	Arg	Tyr	Thr	Lys	Lys 460	Val	Pro	Gln	Val
	Ser 465	Thr	Pro	Thr	Leu	Val 470	Glu	Val	Ser	Arg	Asn 475	Leu	Gly	Lys	Val	Gly 480
	Ser	Lys	Cys	Cys	Lys 485	His	Pro	Glu	Ala	Lys 490	Arg	Met	Pro	Суз	Ala 495	Glu
	Asp	Tyr	Leu	Ser 500	Val	Val	Leu	Asn	Gln 505	Leu	Cys	Val	Leu	His 510	Glu	Lys
	Thr	Pro	Val 515	Ser	Asp	Arg	Val	Thr 520	Lys	Cys	Cys	Thr	Glu 525	Ser	Leu	Val
	Asn	Arg 530	Arg	Pro	Cys	Phe	Ser 535	Ala	Leu	Glu	Val	Asp 540	Glu	Thr	Tyr	Val
	Pro 545	Lys	Glu	Phe	Asn	Ala 550	Glu	Thr	Phe	Thr	Phe 555	His	Ala	Asp	Ile	Cys 560
	Thr	Leu	Ser	Glu	Lys 565	Glu	Arg	Gln	Ile	Lys 570	Lys	Gln	Thr	Ala	Leu 575	Val
,	Glu	Leu	Val	Lys 580	His	Lys	Pro	Lys	Ala 585	Thr	Lys	Glu	Gln	Leu 590	Lys	Ala

Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp

595

600

605

Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala 610 615 620

Ser Gln Ala Ala Leu Gly Leu 625 630

<210> 236

<211> 632

<212> PRT

<213> Homo sapiens

<400> 236

Met Leu Leu Gln Ala Phe Leu Phe Leu Leu Ala Gly Phe Ala Ala Lys

1 5 10 15

Ile Ser Ala Ser Pro Lys Met Val Gln Gly Ser Gly Cys Phe Gly Arg
20 25 30

Lys Met Asp Arg Ile Ser Ser Ser Gly Leu Gly Cys Lys Val Asp 35 40 45

Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu 50 55 60

Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln 65 70 75 80

Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe 85 90 95

Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser 100 105 110

Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg 115 120 125

Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu 130 140

Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro 145 150 155 160

Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp 165 170 175

Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg 180 185 190

His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr 195 200 205

Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys 210 215 220

Leu 225	Leu	Pro	Lys	Leu	Asp 230	Glu	Leu	Arg	Asp	Glu 235	Gly	Lys	Ala	Ser	Ser 240
Ala	Lys	Gln	Arg	Leu 245	Lys	Cys	Ala	Ser	Leu 250	Gln	Lys	Phe	Gly	Glu 255	Arg
Ala	Phe	Lys	Ala 260	Trp	Ala	Val	Ala	Arg 265	Leu	Ser	Gln	Arg	Phe 270		Lys
Ala	Glu	Phe 275	Ala	Glu	Val	Ser	Lys 280	Leu	Val	Thr	Asp	Leu 285	Thr	Lys	Val
His	Thr 290		Cys	Cys	His	Gly 295	Asp	Leu	Leu	Glu	Сув 300	Ala	Asp	Asp	Arg
Ala 305	Asp	Leu	Ala	Lys	Tyr 310	Ile	Cys	Glu	Asn	Gln 315	Asp	Ser	Ile	Ser	Ser 320
Lys	Leu	Lys	Glu	Cys 325	Суз	Glu	Lys	Pro	<b>Leu</b> 330	Leu	Glu	Lys	Ser	His 335	Cys
Ile	Ala	Glu	Val 340	Glu	Asn	Asp	Glu	Met 345	Pro	Ala	Asp	Leu	Pro 350	Ser	Leu
Ala	Ala	Asp 355	Phe	Val	Glu	Ser	<b>Lys</b> 360	Asp	Val	Cys	Lys	Asn 365	Tyr	Ala	Glu
Ala	Lys 370	Asp	Va1	Phe	Leu	Gly 375	Met	Phe	Leu	Tyr	Glu 380	Tyr	Ala	Arg	Arg
His 385	Pro	Asp	Tyr	Ser	<b>Val</b> 390	Val	Leu	Leu	Leu	Arg 395	Leu	Ala	Lys	Thr	<b>Tyr</b> <b>4</b> 00
Glu	Thr	Thr	Leu	Glu 405	Lys	Суѕ	Cys	Ala	Ala 410	Ala	Asp	Pro	His	Glu 415	Суs
Tyr	Ala	Lys	Val 420	Phe	Asp	Glu	.Phe	Lys 425	Pro	Leu	Val	Glu	Glu 430	Pro	Gln
Asn	Leu	Ile 435	Lys	Gln	Asn	Cys	Glu 440	Leu	Phe	Glu	Gln	Leu 445	Gly	Glu	Tyr
Lys	Phe 450	Gln	Asn	Ala	Leu	Leu 455	Val	Arg	Tyr	Thr	Lys 460	Lys	Val	Pro	Gln
Val 465	Ser	Thr	Pro	Thr	Leu 470	Val	Glu	Val	Ser	Arg 475	Asn	Leu	Gly	Lys	Val 480
Gly	Ser	Lys	Cys	Cys 485	Lys	His	Pro	Glu	Ala 490		Arg	Met	Pro	Cys 495	Ala
Glu	Asp	Tyr	Leu 500	Ser	Val	Val	Leu	Asn 505	Gln	Leu	Cys	Val	Leu 510	His	Glu
Lys	Thr	Pro		Ser	Asp	Arg	Val 520		Lys	Cys	Cys	Thr 525		Ser	Leu

Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr 530 540

Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile 545 550 555 560

Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu 565 570 575

Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys 580 585 590

Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala 595 600 605

Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala 610 615 620

Ala Ser Gln Ala Ala Leu Gly Leu 625 630

<210> 237

<211> 642

<212> PRT

<213> Homo sapiens

<400> 237

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10 15

Tyr Ser Arg Ser Leu Asp Lys Arg Asp Ala His Lys Ser Glu Val Ala 20 25 30

His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu 35 40

Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
50 55 60

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp 65 70 75 80

Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp 85 90 95

Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala 100 105 110

Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
115 120 125

His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
130 135 140

Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro 165 170 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys 185 Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu 200 Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val 225 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser 250 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly 265 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile 280 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp 310 315 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser 330 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly 345 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys . 375 Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu 390 Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys 410 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu 425 Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val

Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His 450 455 460

Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val 465 470 475 480

Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg 485 490 495

Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 500 505 510

Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 515 520 525

Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 530 535 540

Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 545 550 555 560

Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 570 575

Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 580 585 590

Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly 595 600 605

Leu His Gly Asp Gly Ser Phe Ser Asp Glu Met Asn Thr Ile Leu Asp 610 615 620

Asn Leu Ala Ala Arg Asp Phe Ile Asn Trp Leu Ile Gln Thr Lys Ile 625 630 635 640

Thr Asp

<210> 238

<211> 642

<212> PRT

<213> Homo sapiens

<400> 238

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10

Tyr Ser Arg Ser Leu Asp Lys Arg His Gly Asp Gly Ser Phe Ser Asp 20 25 30

Glu Met Asn Thr Ile Leu Asp Asn Leu Ala Ala Arg Asp Phe Ile Asn  $35 \hspace{1cm} 40 \hspace{1cm} 45$ 

Trp Leu Ile Gln Thr Lys Ile Thr Asp Asp Ala His Lys Ser Glu Val

50 ⋅		-60			
	 	_			

Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val 65 70 75 80

Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His
85 90 95

Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala 100 105 110

Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly 115 120 125

Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met 130 135 140

Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu 145 150 155 160

Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu 165 170 175

Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu 180 185 190

Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala 195 200 205

Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu 210 215 220

Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp 225 230 235 240

Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys 245 250 255

Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala 260 265 270

Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val 275 280 285

Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His 290 295 300

Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr 305 310 315 320

Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys 325 330 335

Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn 340 345 350

Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu

		355					360					365			
Ser	Lys 370	Asp	Val	Cys	Lys	Asn 375	Tyr	Ala	Glu	Ala	Lys 380	Asp	Val	Phe	Leu
Gly 385	Met	Phe	Leu	Tyr	Glu 390	Tyr	Ala	Arg	Arg	His 395	Pro	Asp	Týr	Ser	Val 400
Val	Leu	Leu	Leu	Arg 405	Leu	Ala	Lys	Thr	Tyr 410	Glu	Thr	Thr	Leu	Glu 415	Lys
Суѕ	Cys	Ala	Ala 420	Ala	Asp	Pro	His	Glu 425	Cys	Tyr	Ala	Lys	Val 430	Phe	Asp
Glu	Phe	Lys. 435	Pro	Leu	Val	Glu	Glu 440	Pro	Gln	Asn	Leu	Ile 445	Lys	Gln	Asn
Суѕ	Glu 450	Leu	Phe	Glu	Gln	Leu 455	Gly	Glu	Tyr	Lys	Phe 460	Gln	Asn	Ala	Leu
Leu 465	Va1	Arg	Tyr	Thr	Lys 470	Lys	Val	Pro	Gln	Val 475	Ser	Thr	Pro	Thr	Leu 480
Val	Glu	Val	Ser	Arg 485	Asn	Leu	Gly	Lys	Val 490	Gly	Ser	Lys	Cys	Суs 495	Lys
His	Pro	Glu	Ala 500	Lys	Arg	Met	Pro	Cys 505	Ala	Glu	Asp	Tyr	Leu 510	Ser	Val
Val	Leu	Asn 515	Gln	Leu	Cys	Val	Leu 520	His	Glu	Lys	Thr	Pro 525	Val	Ser	Asp
Arg	Val 530	Thr	Lys	Суз	Cys	Thr 535	Glu	Ser	Leu	Val	Asn 540	Arg	Arg	Pro	Cys
Phe 545	Ser	Ala	Leu	Glu	Val 550	Asp	Glu	Thr	Tyr	Val 555	Pro	Lys	Glu	Phe	Asn 560
Ala	Glu	Thr	Phe	Thr 565	Phe	His	Ala	Asp	Ile 570	Cys	Thr	Leu	Ser	Glu 575	Lys
Glu	Arg	Gln	Ile 580	Lys	Lys	Gln	Thr	Ala 585	Leu	Val	Glu	Leu	Val 590	Lys	His
Lys	Pro	Lys 595	Ala	Thr	Lys	Glu	Gln 600	Leu	Lys	Ala	Val	Met 605	Asp	Asp	Phe
Ala	Ala 610	Phe	Val	Glu	Lys	Cys 615	Суѕ	Lys	Ala	Asp	Asp 620	Lys	Glu	Thr	Cys
Phe 625	Ala	G1u	Glu	Gly	Lys 630	Lys	Leu	Val	Ala	Ala 635	Ser	Gln	Ala	Ala	Leu 640
Gly	Leu		*												

<210> 239

<211> 636

<212> PRT

<213> Homo sapiens

<400> 239

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10 15

Tyr Ser Arg Ser Leu Asp Lys Arg Asp Ala His Lys Ser Glu Val Ala 20 25 30

His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu 35 40

Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val 50 55 60

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp 65 70 75 80

Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp 85 90 95

Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala 100 105 110

Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln 115 120 125

His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val 130 135 140

Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys 145 150 155 160

Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro 165 170 175

Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys 180 185 190

Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu 195 200 205

Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys 210 225 220

Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val 225 230 235 240

Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser 245 250 255

Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly 260 265 270

Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile 275 280 285

- Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu 290 295 300
- Lys Pro Leu Clu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp 315 320
- Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser 325 330 335
- Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly 340 345 350
- Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val 355 360 365
- Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys 370 375 380
- Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu 385 390 400
- Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys 415
- Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu 420 425 430
- Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val 435 440 445
- Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His 450 455 460
- Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val 465 470 480
- Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
  485 490 495
- Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 500 510
- Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 515 520 525
- Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 530 535 540
- Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 545 550 555 560
- Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 570 575

Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 580 585 590

Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly 595 600 605

Leu His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys 610 615 620

Gln Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu 625 630 635

<210> 240

<211> 636

<212> PRT

<213> Homo sapiens

<400> 240

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10

Tyr Ser Arg Ser Leu Asp Lys Arg His Ser Asp Gly Ile Phe Thr Asp 20 25 30

Ser Tyr Ser Arg Tyr Arg Lys Gln Met Ala Val Lys Lys Tyr Leu Ala 35 40 45

Ala Val Leu Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp 50 60

Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln 65 70 75 80

Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu 85 90 95

Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn 100 105 110

Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val 115 120 125

Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys 130 135 140

Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asn 145 150 155 160

Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr 165 170 175

Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu 180 185 190

Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly 235 Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp 280 Leu Thr Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys 295 Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys 360 Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys 455 460 Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn 470 Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg

Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys 500 510

Val Leu His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys 515 520 525

Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val 530 535 540

Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe 545 550 555 560

His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys 565 570 575

Gln Thr Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys 580 585 590

Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys 595 600 605

Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys 610 615 620

Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu 625 630 635

<210> 241

<211> 647

<212> PRT

<213> Homo sapiens

<400> 241

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10 15

Tyr Ser Arg Ser Leu Asp Lys Arg Asp Ala His Lys Ser Glu Val Ala
20 25 30

His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu 35 40

Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val 50 55 60

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp 65 70 75 80

Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp 85 90 95

Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala 100 105 110

Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln

His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val 135 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys 185 Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Pro Lys Leu Asp Glu 200 Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser 245 250 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile 280 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu 295 Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp 310 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser 325 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly 345 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys 405 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu

115

Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val 440 Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 570 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 585 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly 600 605 Leu His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys 615 Gln Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu Gly Lys Arg Tyr - 630 635 640 Lys Gln Arg Val Lys Asn Lys

<210> 242

<211> 647

<212> PRT

<213> Homo sapiens

<400> 242

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10 15

Tyr Ser Arg Ser Leu Asp Lys Arg His Ser Asp Gly Ile Phe Thr Asp 20 25 30

Ser Tyr Ser Arg Tyr Arg Lys Gln Met Ala Val Lys Lys Tyr Leu Ala 40 Ala Val Leu Gly Lys Arg Tyr Lys Gln Arg Val Lys Asn Lys Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala 105 Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu 120 His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu 135 Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His 200 Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala 280 Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His 295 Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala 310 315 Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys

Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile 345 Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala 360 Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala 375 Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His 390 395 Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr 420 425 Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn 440 Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys 520 Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys 565 Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val 585 Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala 600 Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala

Ser Gln Ala Ala Leu Gly Leu 645

<210> 243

<211> 728

<212> PRT

<213> Homo sapiens

<400> 243

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala

Tyr Ser Arg Ser Leu Asp Lys Arg Asp Ala His Lys Ser Glu Val Ala 20 25 30

His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu 35 40 45

Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val $50 \ \ \, 55 \ \ \, 60$ 

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp 65 70 75 80

Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp 85 90 95

Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala 100 105 110

Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln 115 120 125

His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
130 135 140

Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys 145 150 155 160

Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro 165 170 175

Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys 180 185 190

Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu 195 200 205

Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys 210 225

Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val 225 230 235 240

Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser 245 250 255

- Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly 260 265 270
- Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile 275 280 285
- Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu 290 295 300
- Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp 305 310 315 320
- Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser 325 330 335
- Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly 340 345 350
- Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val 355 360 365
- Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys 370 375 380
- Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu 385 390 395 400
- Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys 405 410 415
- Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu 420 425 430
- Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val 435 440 445
- Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His 450 455 460
- Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val 465 470 475 480
- Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
  485 490 495
- Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 500 505 510
- Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 515 520 525
- Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 530 535 540

Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 545 550 555 560

Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 570 575

Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 580 585 590

Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly 595 600 605

Leu His Ser Asp Pro Ala Arg Gly Glu Leu Ser Val Cys Asp Ser 610 615 620

Ile Ser Glu Trp Val Thr Ala Ala Asp Lys Lys Thr Ala Val Asp Met 625 630 630 635

Ser Gly Gly Thr Val Thr Val Leu Glu Lys Val Pro Val Ser Lys Gly 645 650 655

Gln Leu Lys Gln Tyr Phe Tyr Glu Thr Lys Cys Asn Pro Met Gly Tyr 660 665 670

Thr Lys Glu Gly Cys Arg Gly Ile Asp Lys Arg His Trp Asn Ser Gln 675 680 685

Cys Arg Thr Thr Gln Ser Tyr Val Arg Ala Leu Thr Met Asp Ser Lys 690 695 700

Lys Arg Ile Gly Trp Arg Phe Ile Arg Ile Asp Thr Ser Cys Val Cys 705 710 715 720

Thr Leu Thr Ile Lys Arg Gly Arg 725

<210> 244

<211> 728

<212> PRT

<213> Homo sapiens

<400> 244

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10 15

Tyr Ser Arg Ser Leu Asp Lys Arg His Ser Asp Pro Ala Arg Arg Gly
20 25 30

Glu Leu Ser Val Cys Asp Ser Ile Ser Glu Trp Val Thr Ala Ala Asp 35 40

Lys Lys Thr Ala Val Asp Met Ser Gly Gly Thr Val Thr Val Leu Glu 50 60

Lys Val Pro Val Ser Lys Gly Gln Leu Lys Gln Tyr Phe Tyr Glu Thr

65	*				70	•				75					80
Lys	Cys	Asn	Pro	Met 85	Gly	Tyr	Thr	Lys	Glu 90	Gly	Суs	Arg	Gly	Ile 95	Asp
Lys	Arg	His	Trp 100	Asn	Ser	Gln	Суѕ	Arg 105	Thr	Thr	Gln	Ser	Tyr 110	Val	Arg
Ala	Leu	Thr 115	Met	Asp	Ser	Lys	Lys 120	Arg	Ile	Gly	Trp	Arg 125	Phe	Ile	Arg
	130				Val	135					140				
Ala 145		Lys	Ser	Glu	Val 150	Ala	His	Arg	Phe	Lys 155	Asp	Leu	Gly	Glu	G1u 160
Asn	Phe	Lys	Ala	Leu 165	Val	Leu	Ile	Ala	Phe 170	Ala	Gln	Tyr	Leu	Gln 175	Gln
			180		His			185				•	190		
Ala	Lys	Thr 195	Суѕ	Val	Ala	Asp	Glu 200	Ser	Ala	Glu	Asn	Cys 205	Asp	Lys	Ser
Leu	His 210	Thr	Leu	Phe	Gly	Asp 215	Lys	Leu	Cys	Thr	Val 220	Ala	Thr	Leu	Arg
Glu 225	Thr	Tyr	Glỳ	Glu	Met 230	Ala	Asp	Cys	Cys	Ala 235	Lys	Gln	Glu	Pro	Glu 240
Arg	Asn	Glu	Cys	Phe 245	Leu	Gln	His	Lys	Asp 250	Asp	Asn	Pro	Asn	Leu 255	Pro
Arg	Leu	Val	Arg 260	Pro	Glu	Val	Asp	Val 265	Met	Cys	Thr	Ala	Phe 270	His	Asp
Asn	Glu	Glu 275	Thr	Phe	Leu	Lys	Lys 280	Tyr	Leu	Tyr	Glu	Ile 285	Ala	Arg	Arg
His	Pro 290	Tyr	Phe	Tyr	Ala	Pro 295	Glu	Leu	Leu	Phe	Phe 300	Ala	Lys	Arg	Tyr
Lys 305	Ala	Ala	Phe	Thr	Glu 310	Cys	Сув	Gln	Ala	Ala 315	Asp	Lys	Ala	Ala	Cys 320
Leu	Leu	Pro	Lys	Leu 325	Asp	Glu	Leu	Arg	Asp 330	Glu	Gly	Lys	Ala	Ser 335	Ser
Ala	Lys	Gln	Arg 340	Leu	Lys	Cys	Ala	Ser 345	Leu	Gln	Lys	Phe	Gly 350	Glu	Arg
Ala	Phe	Lys 355	Ala	Trp	Ala	Val	Ala 360	Arg	Leu	Ser	Gln	Arg 365	Phe	Pro	Lys
112	Glu	Dho	77.7	C1,,	17 n 1	Co~	Tara	T 011	17-1	mb~	N ===	T	mb	T	**- 7

375 His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg 395 Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser 405 Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu 455 Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln 520 Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr 535 Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val 570 565 Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala 585 Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu 600 Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr 630 635 Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu 660 Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys

675 680 685

Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala 690 695 700

Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala 705 710 715 720

Ala Ser Gln Ala Ala Leu Gly Leu 725

<210> 245

<211> 728

<212> PRT

<213> Homo sapiens

<400> 245

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10 15

Tyr Ser Arg Ser Leu Asp Lys Arg Asp Ala His Lys Ser Glu Val Ala 20 25 30

His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu 35 40 45

Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
50 60

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp 65 70 75 80

Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp 85 90 95

Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala 100 105 110

Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln 115 120 125

His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val 130 , 135 140

Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys 145 150 155 160

Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro 165 170 175

Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys 180 185 190

Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu 195 200 205

Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val 235 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly 265 260 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile 280 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu 295 Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp 315 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser 325 330 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val 360 Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu 385 390 Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys 410 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His 455 Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val 470 465 Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg 490 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 500 505

Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 520 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 535 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 585 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly 600 Leu His Ser Asp Pro Ala Arg Arg Gly Glu Leu Ser Val Cys Asp Ser 615 Ile Ser Glu Trp Val Thr Ala Ala Asp Lys Lys Thr Ala Val Asp Met 630 Ser Gly Gly Thr Val Thr Val Leu Glu Lys Val Pro Val Ser Lys Gly 650 Gln Leu Lys Gln Tyr Phe Tyr Glu Thr Lys Cys Asn Pro Met Gly Tyr 665 Thr Lys Glu Gly Cys Arg Gly Ile Asp Lys Arg His Trp Asn Ser Gln 680 Cys Arg Thr Thr Gln Ser Tyr Val Arg Ala Leu Thr Met Asp Ser Lys 695 700 Lys Arg Ile Gly Trp Arg Phe Ile Arg Ile Asp Thr Ser Cys Val Cys 710 715 Thr Leu Thr Ile Lys Arg Gly Arg

<210> 246 <211> 728 <212> PRT <213> Homo sapiens

<400> 246

and buplotte

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 15

Tyr Ser Arg Ser Leu Asp Lys Arg His Ser Asp Pro Ala Arg Arg Gly 20

Lys Lys Thr Ala Val Asp Met Ser Gly Gly Thr Val Thr Val Leu Glu 550 Val Pro Val Ser Lys Gly Gln Leu Lys Gln Tyr Phe Tyr Glu Thr 65 Val Pro Val Ser Lys Gly Thr Lys Glu Gly Cys Arg Gly Ile Asp 90 Val Ser Ser Gly Tyr Thr Lys Glu Gly Cys Arg Gly Ile Asp 95 Ser Lys Arg His Trp Asn Ser Gln Cys Arg Thr Thr Gln Ser Tyr Val Arg 110 Val Arg 115 Val Leu Thr Met Asp Ser Lys Lys Arg Ile Gly Trp Arg Phe Ile Arg 115 Val Arg 135 Thr Leu Thr Ile Lys Arg Gly Arg Asp 140 Arg Asp 140 Val Arg 155 Val Cys Arg Phe Lys Asp Leu Gly Glu Glu 145 Val Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Iro Cys Gln Gln Iro Cys Arg Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Iro Cys Cys Arg Phe Lys Arg Gly Arg Cys Cys Phe Ile Gln Gln Iro Cys Arg Phe Lys Ala Gln Tyr Leu Gln Gln Iro Cys Phe Lys Ala Gln Tyr Leu Gln Gln Iro Cys Phe Lys Ala Gln Tyr Leu Gln Gln Iro Cys Phe Lys Ala Gln Tyr Leu Gln Gln Iro Cys Phe Lys Ala Gln Tyr Leu Gln Gln Iro Cys Phe Lys Phe Lys Ala Gln Tyr Leu Gln Gln Iro Cys Phe Lys Phe L

Glu Leu Ser Val Cys Asp Ser Ile Ser Glu Trp Val Thr Ala Ala Asp

Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser 195 200 205

Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe 180 185 190

Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg 210 215 220

Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu 225 230 235 240

Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro 245 250 250

Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp 260 265 270

Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg 275 280 285

His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr 290 295 300

Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys 305 310 315 320

Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser 325 330 335

Ala	Lys	Gln	Arg 340	Leu	Lys	Cys	Ala	Ser 345	Leu	Gln	Lys	Phe	Gly 350	Glu	Arg
Ala	Phe	Lys 355	Ala	Trp	Ala	Val	Ala 360	Arg	Leu	Ser	Gln	Arg 365	Phe	Pro	Lys
Ala	Glu 370	Phe	Ala	Glu	Val	Ser 375	Lys	Leu	Val	Thr	Asp 380	Leu	Thr	Lys	Val
His 385	Thr	Glu	Cys	Cys	His 390	Gly	Asp	Leu	Leu	G1u 395	Суѕ	Ala	Asp	Asp	Arg 400
Ala	Asp	Leu	Ala	Lys 405	Tyr	Ile	Cys	Glu	Asn 410	Gln	Asp	Ser	Ile	Ser 415	Ser
Lys	Leu	Lys	Glu 420	Cys	Cys	Glu	Lys	Pro 425	Leu	Leu	Glu	Lys	Ser 430	His	Cys
Ile	Ala	Glu 435	Val	Glu	Asn	Asp	Glu 440	Met	Pro	Ala	Asp	Leu 445	Pro	Ser	Leu
Ala	Ala 450	Asp	Phe	Val	Glu	Ser 455	Lys	Asp	Val	Cys	Lys 460	Asn	Tyr	Ala	Glu
Ala 465	Lys	Asp	Val	Phe	Leu 470	Gly	Met	Phe	Leu	Tyr 475	Glu	Tyr	Ala	Arg	Arg 480
His	Pro	Asp	Tyr	Ser 485	Val	Val	Leu	Leu	Leu 490	Arg	Leu	Ala	Lys	Thr 495	Tyr
Glu	Thr	Thr	Leu 500	Glu	Lys	Cys	Cys	Ala 505	Ala	Ala	Asp	Pro	His 510	Glu	Суѕ
Tyr	Ala	Lys 515	Val	Phe	Asp	Glu	Phe 520	Lys	Pro	Leu	Val	G1u 525	Glu	Pro	Gln
Asn	Leu 530	Ile	Lys	Gln	Asn	Cys 535	Glu	Leu	Phe	Glu	Gln 540	Leu	Gly	Glu	Tyr
Lys 545	Phe	Gln	Asn	Ala	Leu 550	Leu	Val	Arg	Tyr	Thr 555	Lys	Lys	Val	Pro	Gln 560
Val	Ser	Thr	Pro	Thr 565	Leu	Val	Glu	Val	Ser 570	Arg	Asn	Leu	Gly	Lys 575	Val
Gly	Ser	Lys	Суs 580	Cys	Lys	His	Pro	Glu 585	Ala	Lys	Arg	Met	Pro 590	Cys	Ala
Glu	Asp	Tyr 595	Leu	Ser	Val	Val	Leu 600	Asn	Gln	Leu	Суз	Val 605	Leu	His	Glu
Lys	Thr 610	Pro	Val	Ser	Asp	Arg 615	Val	Thr	Lys	Cys	Суs 620	Thr	Glu	Ser	Leu
Val 625	Asn	Arg	Arg	Pro	Cys 630	Phe	Ser	Ala	Leu	Glu 635	Val	Asp	Glu	Thr	Tyr 640

Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile 645 650 655

Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu 660 665 670

Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys 675 680 . 685

Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala 690  $\phantom{-}$  695  $\phantom{-}$  700

Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala 705 710 715 720

Ala Ser Gln Ala Ala Leu Gly Leu 725

<210> 247

<211> 728

<212> PRT

<213> Homo sapiens

<400> 247

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10 15

Tyr Ser Arg Ser Leu Asp Lys Arg Asp Ala His Lys Ser Glu Val Ala
20 25 30

His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu 35 40 45

Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val 50 60

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp 65 70 75 80

Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp 85 90 95

Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala 100 105 110

Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln 115 120 125

His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val 130 135 140

Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys 145 150 155 160

Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro 165 170 175

Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val 230 235 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser 245 250 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile 280 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu 295 Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser 330 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly 345 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val 360 Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys 405 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His 455 460 Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val

485 490 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 500 Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 520 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu His Ser Asp Pro Ala Arg Arg Gly Glu Leu Ser Val Cys Asp Ser Ile Ser Glu Trp Val Thr Ala Ala Asp Lys Lys Thr Ala Val Asp Met 635 Ser Gly Gly Thr Val Thr Val Leu Glu Lys Val Pro Val Ser Lys Gly Gln Leu Lys Gln Tyr Phe Tyr Glu Thr Lys Cys Asn Pro Met Gly Tyr 665 Thr Lys Glu Gly Cys Arg Gly Ile Asp Lys Arg His Trp Asn Ser Gln

Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg

Cys Arg Thr Thr Gln Ser Tyr Val Arg Ala Leu Thr Met Asp Ser Lys 690 695 700

Lys Arg Ile Gly Trp Arg Phe Ile Arg Ile Asp Thr Ser Cys Val Cys 705 710 715 720

Thr Leu Thr Ile Lys Arg Gly Arg 725

<210> 248

<211> 728

<212> PRT

<213> Homo sapiens

<400> 248

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala Tyr Ser Arg Ser Leu Asp Lys Arg His Ser Asp Pro Ala Arg Arg Gly Glu Leu Ser Val Cys Asp Ser Ile Ser Glu Trp Val Thr Ala Ala Asp Lys Lys Thr Ala Val Asp Met Ser Gly Gly Thr Val Thr Val Leu Glu Lys Val Pro Val Ser Lys Gly Gln Leu Lys Gln Tyr Phe Tyr Glu Thr Lys Cys Asn Pro Met Gly Tyr Thr Lys Glu Gly Cys Arg Gly Ile Asp Lys Arg His Trp Asn Ser Gln Cys Arg Thr Thr Gln Ser Tyr Val Arg Ala Leu Thr Met Asp Ser Lys Lys Arg Ile Gly Trp Arg Phe Ile Arg Ile Asp Thr Ser Cys Val Cys Thr Leu Thr Ile Lys Arg Gly Arg Asp 135 Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu 150 Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe 185 Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser 200 Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg 215 220 Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asn Pro Asn Leu Pro 245 250 Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp 265 Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg 280 His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr

Lys 305	Ala	Ala	Pne	Thr	310	cys	Cys	Gin	ALA	315	Asp	rys	Ala	Ala	320
Leu	Leu	Pro	Lys	Leu 325	Asp	Glu	Leu	Arg	Asp 330	Glu	Gly	Lys	Ala		Ser
Ala	Lys	Gln	Arg 340	Leu	Lys	Cys	Ala	Ser 345	Leu	Gln	Lys	Phe	Gly 350	Glu	Arg
Ala	Phe	Lys 355	Ala	Trp	Ala	Val	Ala 360	Arg	Leu	Ser	Gln	Arg 365	Phe	Pro	Lys
	Glu 370	Phe	Ala	Glu	Val	Ser 375	Lys	Leu	Val	Thr	Asp 380	Leu	Thr	Lys	Val
His 385	Thr	Glu	Суѕ	Cys	His 390	Gly	Asp	Leu	Leu	Glu 395	Cys	Ala	Asp	Asp	Arg 400
Ala	Asp	Leu	Ala	Lys 405	Tyr	Ile	Cys	Glu	Asn 410	Gln	Asp	Ser	Ile	Ser 415	Ser
Lys	Leu	Lys	Glu 420	Cys	Суѕ	Glu	Lys	Pro 425	Leu	Leu	Glu	Lys	Ser 430	His	Суѕ
Ile	Ala	Glu 435	Val	Glu	Asn	Asp	Glu 440	Met	Pro	Ala	Asp	Leu 445	Pro	Ser	Leu
,	450	_				455	_	_			460		Tyr		
Ala 465	Lys	Asp	Val	Phe	Leu 470	Gly	Met	Phe	Leu	Tyr 475	Glu	Tyr	Ala	Arg	Arg 480
His	Pro	Asp	Tyr	Ser 485	Val	Val	Leu	Leu	Leu 490	Arg	Leu	Ala	Lys	Thr 495	Tyr
Glu	Thr	Thr	Leu 500	Glu	Lys	Cys	Cys	Ala 505	Ala	Ala	Asp	Pro	His 510	Glu	Суѕ
		515					520	-				525	Glu		
	530					535					540		Gly		
545					550			_	-	555	_	_	Val		560
				565		•			5,70				Gly	575	
Gly	Ser	Lys	Суs 580	Cys	Lys	His	Pro	Glu 585	Ala	Lys	Arg	Met	Pro 590	Cys	Ala
Glu	Asp	Tyr 595	Leu	Ser	Val	Val	Leu 600	Asn	Gln	Leu	Cys	Val 605	Leu	His	Glu

Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu 610 620

Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr 625 630 635 640

Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile 645 650 655

Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu 660 665 670

Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys 675 680 685

Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala 690 695 700

Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala 705 710 715 720

Ala Ser Gln Ala Ala Leu Gly Leu 725

<210> 249

<211> 801

<212> PRT

<213> Homo sapiens

<400> 249

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10 15

Tyr Ser Arg Ser Leu Asp Lys Arg Asp Ala His Lys Ser Glu Val Ala 20 25 30

His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu 35 40 45

Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val 50 55 60

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp 65 70 75 80

Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp 85 90 95

Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala 100 105 110

Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln 115 120 125

His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val

WO 2005/003296

	130					135.					140				
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Lys	Tyr	Leu	Tyr	Gĺu 165	Ile	Ala	Arg	Arg	His 170	Pro	Tyr	Phe	Tyr	Ala 175	
Glu	Гел	Leu	Phe 180	Phe	Ala	Lys	Arg	Tyr 185	Lys	Ala	Ala	Phe	Thr 190	Glu	Cys
Cys	Gln	Ala 195	Ala	Asp	Lys	Ala	Ala 200	Суѕ	Leu	Leu	Pro	Lys 205	Leu	Asp	Glu
Leu	Arg 210	Asp	Glu	Gly	Lys	Ala 215	Ser	Ser	Ala	Lys	Gln 220	Arg	Leu	Lys	Cys
Ala 225	Ser	Leu	Gln	Lys	Phe 230	Gly	Glu	Arg	Ala	Phe 235	Lys	Ala	Trp	Ala	Val 240
Ala	Arg	Leu	Ser	Gln 245	Arg	Phe	Pro	Lys	Ala 250	Glu	Phe	Aĺa	Glu	Va1 255	Ser
Lys	Leu	Val	Thr 260	Asp	Leu	Thr	Lys	Val 265	His	Thr	Glu	Cys	Cys 270	His	Gly
Asp	Leu	Leu 275	Glu	Cys	Ala	Asp	Asp 280	Arg	Ala	Asp	Leu	Ala 285	Lys	Tyr	Ile
Cys	Glu 290	Asn	Gln	Asp	Ser	Ile 295	Ser	Ser	Lys	Leu	Lys 300	Glu	Cys	Cys	Glu
Lys 305	Pro	Leu	Leu	Glu	Lys 310	Ser	His	Суз	Ile	Ala 315	Glu	Val	Glu	Asn	Asp 320
Glu	Met	Pro	Ala	Asp 325	Leu	Pro	Ser	Leu	Ala 330	Ala	Asp	Phe	Val	Glu 335	Ser
Lys	Asp	Val	Cys 340	Lys	Asn	Tyr	Ala	Glu 345	Ala	Lys	Asp	Val	Phe 350	Leu	Gly
Met	Phe	Leu 355	Tyr	Glu	Tyr	Ala	Arg 360	Arg	His	Pro	Asp	Туг 365	Ser	Val	Val
Leu	Leu 370	Leu	Arg	Leu	Ala	Lys 375	Thr	Tyr	Glu	Thr	Thr 380	Leu	Glu	Lys	Cys
Cys 385	Ala	Ala	Ala	Asp	Pro 390	His	Glu	Cys	Tyr	Ala 395	Lys	Val	Phe	Asp	Glu 400
Phe	Lys	Prò	Leu	Val 405	Glu	Glu	Pro	Gln	Asn 410	Leu	Ile	Lys	Gln	Asn 415	Cys
Glu	Leu	Phe	Glu 420	Gln	Leu	Gly	Glu	Tyr 425	Lys	Phe	Gln	Asn	Ala 430	Leu	Leu
**- 1	3	m	m1	T	T	**- 1	- D	C1-	17-7	C ~ ~	mb~	D	mb-	T	17-1

435 440 Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Lys His 455 Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg 485 490 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 505 Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 520 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 535 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 550 555 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 585 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly 600 Leu Phe Pro Leu Pro Ala Gly Lys Arg Pro Pro Glu Ala Pro Ala Glu 615 620 Asp Arg Ser Leu Gly Arg Arg Arg Ala Pro Phe Ala Leu Ser Ser Asp Ser Asn Met Pro Glu Asp Tyr Pro Asp Gln Phe Asp Asp Val Met Asp Phe Ile Gln Ala Thr Ile Lys Arg Leu Lys Arg Ser Pro Asp Lys Gln 665 Met Ala Val Leu Pro Arg Arg Glu Arg Asn Arg Gln Ala Ala Ala Ala Asn Pro Glu Asn Ser Arg Gly Lys Gly Arg Arg Gly Gln Arg Gly Lys Asn Arg Gly Cys Val Leu Thr Ala Ile His Leu Asn Val Thr Asp Leu 715 Gly Leu Gly Tyr Glu Thr Lys Glu Glu Leu Ile Phe Arg Tyr Cys Ser 725 730

Gly Ser Cys Asp Ala Ala Glu Thr Thr Tyr Asp Lys Ile Leu Lys Asn

740 745 750

Leu Ser Arg Asn Arg Arg Leu Val Ser Asp Lys Val Gly Gln Ala Cys 755 760 765

Cys Arg Pro Ile Ala Phe Asp Asp Asp Leu Ser Phe Leu Asp Asp Asn 770 775 780

Leu Val Tyr His Ile Leu Arg Lys His Ser Ala Lys Arg Cys Gly Cys 785 790 795 800

Ile

<210> 250

<211> 801

<212> PRT

<213> Homo sapiens

<400> 250

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10 15

Tyr Ser Arg Ser Leu Asp Lys Arg Phe Pro Leu Pro Ala Gly Lys Arg
20 25 30

Pro Pro Glu Ala Pro Ala Glu Asp Arg Ser Leu Gly Arg Arg Arg Ala 35 40 45

Pro Phe Ala Leu Ser Ser Asp Ser Asn Met Pro Glu Asp Tyr Pro Asp 50 55 60

Gln Phe Asp Asp Val Met Asp Phe Ile Gln Ala Thr Ile Lys Arg Leu 65 70 75 80

Lys Arg Ser Pro Asp Lys Gln Met Ala Val Leu Pro Arg Arg Glu Arg 85 90 95

Asn Arg Gln Ala Ala Ala Ala Asn Pro Glu Asn Ser Arg Gly Lys Gly
100 105 110

Arg Arg Gly Gln Arg Gly Lys Asn Arg Gly Cys Val Leu Thr Ala Ile 115 120 125

His Leu Asn Val Thr Asp Leu Gly Leu Gly Tyr Glu Thr Lys Glu Glu
130 140

Leu Ile Phe Arg Tyr Cys Ser Gly Ser Cys Asp Ala Ala Glu Thr Thr 145 150 155 160

Tyr Asp Lys Ile Leu Lys Asn Leu Ser Arg Asn Arg Arg Leu Val Ser 165 170 175

Asp Lys Val Gly Gln Ala Cys Cys Arg Pro Ile Ala Phe Asp Asp Asp 180 185 190

Leu Ser Phe Leu Asp Asp Asn Leu Val Tyr His Ile Leu Arg Lys His 200 Ser Ala Lys Arg Cys Gly Cys Ile Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val 245 250 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp 265 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp 280 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys 345 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro 360 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu 395 Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys 405 410 Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile

490

Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu

485

Lys Pro Leu Clu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser 520 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly 535 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val 550 555 Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys 600 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu 615 Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val 665 Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg 680 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 695 700 Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 725 730 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly

Leu

225

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Тут	Ser	Arg	Ser 20	Leu	Asp	Lys	Arg	Asp 25	Ala	His	Lys	Ser	G1u 30	Val	Ala
His	Arg	Phe 35	Lys	Asp	Leu	Gly	Glu 40	Glu	Asn	Phe	Lys	Ala 45	Leu	Val	Leu
Ile	Ala 50	Phe	Ala	Gln	Tyr	Leu 55	Gln	Gln	Cys	Pro	Phe 60	Glu	Asp	His	Val
Lys 65	Leu	Val	Asn	Glu	Val 70	Thr	Glu	Phe	Ala	Lys 75	Thr	Суѕ	Val	Ala	Asp 80
Glu	Ser	Ala	Glu	Asn 85	Cys	Asp	Lys	Ser	Leu 90	His	Thr	Leu	Phe	Gly 95	Asp
Lys	Leu	Cys	Thr 100	Val	Ala	Thr	Leu	Arg 105	Glu	Thr	Tyr	Gly	Glu 110	Met	Ala
Asp	Cys	Cys 115		Lys	Gln	Glu	Pro 120		Arg	Asn	Glu	Cys 125	Phe	Leu	Gln
Hiˌs	Lys 130	Asp	Asp	Asn	Pro	Asn 135	Leu	Pro	Arg	Leu	Val 140	Arg	Pro	Glu	Val
Asp 145	Val	Met	Cys	Thr	Ala 150	Phe	His	Asp	Asn	Glu 155	Glu	Thr	Phe	Leu	Lys 160
Lys	Tyr	Leu	Tyr	Glu 165	Ile	Ala	Arg	Arg	His 170	Pro	Tyr	Phe	Tyr	Ala 175	Pro
Glu	Leu	Leu	Phe	Phe	Ala	Lys	Arg	Tyr	Lys	Ala	Äla	Phe	Thr	Glu	Cys

185

Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu 195 200 205

Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys

Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val

215

230

220

Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser 245 250 255

Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly 260 265 270

Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile 275 280 285

Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu 290 295 300

Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp 305 310 310 315

Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser 325 330 335

Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly 340 345 350

Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val 355 360 365

Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys 370 375 380

Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu 385 390 395 400

Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys 405 410 415

Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu 420 425 430

Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val 435 440 445

Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His 450 455 460

Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val 465 470 475 480

Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg 485 490 495

Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 500 505 510

Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 515 520 525

Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 530 535 540

Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 545 550 555 560

Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 570 575

Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 580 585 590

Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
595 600 605

Leu Ile Trp Met Cys Arg Glu Gly Leu Leu Leu Ser His Arg Leu Gly 610 620

Pro Ala Leu Val Pro Leu His Arg Leu Pro Arg Thr Leu Asp Ala Arg 625 630 635 640

Ile Ala Arg Leu Ala Gln Tyr Arg Ala Leu Leu Gln Gly Ala Pro Asp
645 650 655

Ala Met Glu Leu Arg Glu Leu Thr Pro Trp Ala Gly Arg Pro Pro Gly 660 665 670

Pro Arg Arg Arg Ala Gly Pro Arg Arg Arg Arg Ala Arg Leu 675 680 685

Gly Ala Arg Pro Cys Gly Leu Arg Glu Leu Glu Val Arg Val Ser Glu 690 695 700

Leu Gly Leu Gly Tyr Ala Ser Asp Glu Thr Val Leu Phe Arg Tyr Cys 705 710 715 720

Ala Gly Ala Cys Glu Ala Ala Ala Arg Val Tyr Asp Leu Gly Leu Arg
725 730 735

Arg Leu Arg Gln Arg Arg Arg Leu Arg Arg Glu Arg Val Arg Ala Gln
740 745 750

Pro Cys Cys Arg Pro Thr Ala Tyr Glu Asp Glu Val Ser Phe Leu Asp 755 760 765

Ala His Ser Arg Tyr His Thr Val His Glu Leu Ser Ala Arg Glu Cys 770 775 780

Ala Cys Val

<210> 252

<211> 711

<212> PRT

<213> Homo sapiens

<400> 252

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala

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	Gly	Leu	Arg 35	Glu	Leu	Glu	Val	Arg 40	Val	Ser	Glu	Leu	Gly 45	Leu	Gly	Tyr
	Ala	Ser 50	Asp	Glu	Thr	Val	Leu 55	Phe	Arg	Tyr	Cys	Ala 60	Gly	Ala	Cys	Glu
	Ala 65	Ala	Ala	Arg	Val	Tyr 70	Asp	Leu	Gly	Leu	Arg 75	Arg	Leu	Arg	Gln	Arg 80
•	Arg	Arg	Leu	Arg	Arg 85	Glu	Arġ	Val	Arg	Ala 90	Gln	Pro	Cys	Cys	Arg 95	Pro
	Thr	Ala	Tyr	Glu 100	Asp	Glu	Val	Ser	Phe 105	Leu	Asp	Ala	His	Ser 110	Arg	Tyr
	His	Thr	Val 115	His	Glu	Leu	Ser	Ala 120	Árg.	Glu	Cys	Ala	Cys 125	Val	Asp	Ala
	His	Lys 130	Ser	Glu	Val	Ala	His 135	Arg	Phe	Lys	Asp	Leu 140	G1y	Glu	Glu	Asn
	Phe 145	Lys	Ala	Leu	Val	Leu 150	Ile	Ala	Phe	Ala	Gln 155	Tyr	Leu	Gln	Gln	Cys 160
	Pro	Phe	Glu	Asp	His 165	Val	Lys	Leu	Val	Asn 170	Glu	Val	Thr	Glu	Phe 175	Ala
	Lys	Thr	Суѕ	Val 180	Ala	Asp	Glu	Ser	Ala 185	Glu	Asn	Cys	Asp	Lys 190	Ser	Leu
	His	Thr	Leu 195	Phe	Gly	Asp	Lys	Leu 200	Cys	Thr	Val	Ala	Thr 205	Leu	Arg	Glu
	Thr	Tyr 210	Gly	Glu	Met	Ala	Asp 215	Cys	Суѕ	Ala	Lys	Gln 220	Glu	Pro	Glu	Arg
	Asn 225	Glu	Cys	Phe	Leu	Gln 230	His	Lys	Asp	Asp	Asn 235	Pro	Asn	Leu	Pro	Arg 240
	Leu	Val	Arg	Pro	Glu 245	Val	Asp	Val	Met	Cys 250	Thr	Ala	Phe	His	Asp 255	Asn
	Glu	Glu	Thr	Phe 260	Leu	Lys	Lys	Tyr	Leu 265		Glu	Ile	Ala	Arg 270	Arg	His
	Pro	_	Phe 275	Tyr	Ala	Pro	Glu	Leu 280	Leu	Phe	Phe	Ala	Lys 285	Arg	Tyr	Lys
	Ala	Ala 290		Thr	Glu	Cys	Cys 295	Gln	Ala	Ala	Asp	Lys 300	Ala	Ala	Cys	Leu
	Leu	Pro	Lys	Leu	Asp	Glu	Leu	Arg	Asp	Glu	Gly	Lys	Ala	Ser	Ser	Ala

310 305 315 320 Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala 330 Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His 360 Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala 425 Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His 455 Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu 470 Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr 490 485 Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn 505 Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys 520 Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys 585 Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val 600 Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val

615 Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys 630 Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala 665 Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu 705 <210> 253 <211> 728 <212> PRT <213> Homo sapiens <400> 253 Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala Tyr Ser Arg Ser Leu Asp Lys Arg Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu 40 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp 85 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val 135 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys 150

Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro

				165			٠.		170					175	
Glu	Leu	Leu	Phe 180	Phe	Ala	Lys	Arg	Tyr 185	Lys	Ala	Ala	Phe	Thr 190	Glu	Cys
Cys	Gln	Ala 195	Ala	Asp	Lys	Ala	Ala 200	Cys	Leu	Leu	Pro	Lys 205	Leu	Asp	Glu
Leu	Arg 210	Asp	Glu	Gly	Lys	Ala 215	Ser	Ser	Ala	Lys	Gln 220	Arg	Leu	Lys	Cys
Ala 225	Ser	Leu	Gln	Lys	Phe 230	Gly	Glu	Arg	Ala	Phe 235		Ala	Trp	Ala	Val 240
Ala	Arg	Leu	Ser	Gln 245	Arg	Phe	Pro	Lys	Ala 250	Glu	Phe	Ala	Glu	Val 255	Ser
Lys	Leu	Val	Thr 260	Ąsp	Leu	Thr	Lys	Val 265	His	Thr	Glu	Cys	Cys 270	His	Gly
Asp	Leu	Leu 275	Glu	Cys	Ala	Asp	Asp 280	Arg	Ala	Asp	Leu	Ala 285	Lys	Tyr	Ile
Сув	Glu 290	Asn	Gln	Asp	Ser	Ile 295	Ser	Ser	Lys	Leu	Lys 300	Glu	Cys	Суз	Glu
Lys 305	Pro	Leu	Leu	Glu	Lys 310	Ser	His	Суѕ	Ile	Ala 315	Glu	Val	Glu	Asn	Asp 320
Glu	Met	Pro	Ala	Asp 325	Leu	Pro	Ser	Leu	Ala 330	Ala	Asp	Phe	Val	Glu 335	Ser
Lys	Asp	Val	Cys 340	Lys	Asn	Tyr		Glu 345	Ala	Lys	Asp	Val	Phe 350	Leu	Gly
Met	Phe	Leu 355	Tyr	Glu	Tyr	Ala	Arg 360	Arg	His	Pro	Asp	Tyr 365	Ser	Val	Val
Leu	Leu 370	Leu	Arg	Leu	Ala	Lys 375	Thr	Tyr	Glu	Thr	Thr 380	Leu	Glu	Lys	Cys
Суs 385	Ala	Ala	Ala	Asp	Pro 390	His	Glu	Cys	Tyr	Ala 395	Lys	Val	Phe	Asp	Glu 400
Phe	Lys	Pro	Leu	Val 405	Glu	Glu	Pro	Gln	Asn 410	Leu	Ile	Lys	Gln	Asn 415	Cys
Glu	Leu	Phe	Glu 420	Gln	Leu	Gly	Glu	Tyr 425	Lys	Phe	Gln	Asn	Ala 430	Leu	Leu
Val	Arg	Tyr 435	Thr	Lys	Lys	Val	Pro 440	Gln	Val	Ser	Thr	Pro 445	Thr	Leu	Val
Glu	Val <b>4</b> 50	Ser	Arg	Asn		Gly 455	Lys	Val	Gly	Ser	Lys 460	Cys	Cys	Lys	His

Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val

475 465 Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg 485 490 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 505 Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 550 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu Tyr Ala Glu His Lys Ser His Arg Gly Glu Tyr Ser Val Cys Asp Ser Glu Ser Leu Trp Val Thr Asp Lys Ser Ser Ala Ile Asp Ile Arg 630 635 Gly His Gln Val Thr Val Leu Gly Glu Ile Lys Thr Gly Asn Ser Pro 645 Val Lys Gln Tyr Phe Tyr Glu Thr Arg Cys Lys Glu Ala Arg Pro Val 665 Lys Asn Gly Cys Arg Gly Ile Asp Asp Lys His Trp Asn Ser Gln Cys Lys Thr Ser Gln Thr Tyr Val Arg Ala Leu Thr Ser Glu Asn Asn Lys 695 Leu Val Gly Trp Arg Trp Ile Arg Ile Asp Thr Ser Cys Val Cys Ala 710 715

Leu Ser Arg Lys Ile Gly Arg Thr 725

<210> 254

<211> 728

<212> PRT

<213> Homo sapiens

<400> 254

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10 15

Tyr Ser Arg Ser Leu Asp Lys Arg Tyr Ala Glu His Lys Ser His Arg 20 25 30

Gly Glu Tyr Ser Val Cys Asp Ser Glu Ser Leu Trp Val Thr Asp Lys 35 40 45

Ser Ser Ala Ile Asp Ile Arg Gly His Gln Val Thr Val Leu Gly Glu
50 55 60

Ile Lys Thr Gly Asn Ser Pro Val Lys Gln Tyr Phe Tyr Glu Thr Arg 65 70 75 80

Cys Lys Glu Ala Arg Pro Val Lys Asn Gly Cys Arg Gly Ile Asp Asp 85 90 95

Leu Thr Ser Glu Asn Asn Lys Leu Val Gly Trp Arg Trp Ile Arg Ile 115 120 125

Asp Thr Ser Cys Val Cys Ala Leu Ser Arg Lys Ile Gly Arg Thr Asp 130 135 140

Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu 145 150 155 160

Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln
165 170 175

Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe 180 185 190

Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser 195 200 205

Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg 210 215 220

Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu 225 230 235

Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asn Pro Asn Leu Pro 245 250 255

Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp 260 265 270

Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg 275 280 285

His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr 290 295 300

105 305	Ala	Ala	Phe	Thr	310	Суѕ	Cys	GIn	Ala	315	Asp	гЛS	Ala	Ala	320
Leu	Leu	Pro	Lys	Leu 325	Asp	Glu	Leu	Arg	Asp 330	Glu	Gly	Lys	Ala	Ser 335	Ser
Ala	Lys	Gln	Arg 340	Leu	Lys	Cys	Ala	Ser 345	Leu	Gln	Lys	Phe	Gly 350	Glu	Arg
Ala	Phe	Lys 355	Ala	Trp	Ala	Val	Ala 360	Arg	Leu	Ser	Gln	Arg 365	Phe	Pro	Lys
Ala	Glu 370	Phe	Ala	Glu	Val	Ser 375	Lys	Leu	Val	Thr	Asp 380	Leu	Thr	Lys	Val
His 385	Thr	Glu	Cys	Cys	His 390	Gly	Asp	Leu	Leu	Glu 395	Суѕ	Ala	Asp	Asp	Arg 400
Ala	Asp	Leu	Ala	Lys 405	Tyr	Ile	Cys	Glu	Asn 410	Gln	Asp	Ser	Ile	Ser 415	Ser
Lys	Leu	Lys	Glu 420	Суѕ	Cys	Glu	Lys	Pro 425	Leu	Leu	Glu	Lys	Ser 430	His	Cys
Ile	Ala	Glu 435	Val	Glu	Asn	Asp	Glu 440	Met	Pro	Ala	Asp	Leu 445	Pro	Ser	Leu
Ala	Ala 450	Asp	Phe	Val	Glu	Ser 455	Lys	Asp	Val	Cys	Lys 460	Asn	Tyr	Ala	Glu
Ala 465	Lys	Asp	Val	Phe	Leu 470	Gly	Met	Phe	Leu	Tyr 475	Glu	Tyr	Ala	Arg	Arg 480
His	Pro	Asp	Tyr	Ser 485	Val	Val	Leu	Leu	Leu 490	Arg	Leu	Ala	Lys	Thr 495	Tyr
Glu	Thr	Thr	Leu 500	Glu	Lys	Cys	Cys	Ala 505	Ala	Ala	Asp	Pro	His 510	Glu	Cys
Tyr	Ala	Lys 515	Val	Phe	Asp	Glu	Phe 520	Lys	Pro	Leu	Val	Glu 525	Glu	Pro	Gln
Asn	Leu 530	Ile	Lys	Gln	Asn	Cys 535	Glu	Leu	Phe	Glu	Gln 540	Leu	Gly	Glu	Tyr
Lys 545	Phe	Gln	Asn		Leu 550		Val	Arg	Tyr	Thr 555		Lys	Val	Pro	Gln 560
Val	Ser	Thr	Pro	Thr 565	Leu	Val	G1u	Val	Ser 570	Arg	Asn	Leu	Gly	Lys 575	Val
Gly	Ser	Lys	Суз 580	Cys	Lys	His	Pro	Glu 585	Ala	Lys	Arg	Met	Pro 590	Cys	Ala
Glu	Asp	Tyr 595	Leu	Ser	Val	Val	Leu 600	Asn	Gln	Leu	Cys	Val 605	Leu	His	Glu

Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu 610 615 620

Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr 625 630 635 640

Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile 645 650 655

Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu 660 665 670

Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys 675 680 685

Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala 690 695 700

Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala 705 710 715 720

Ala Ser Gln Ala Ala Leu Gly Leu 725

<210> 255

<211> 744

<212> PRT

<213> Homo sapiens

<400> 255

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala  $1 \hspace{1.5cm} 5 \hspace{1.5cm} 10 \hspace{1.5cm} 15$ 

Tyr Ser Arg Ser Leu Asp Lys Arg Asp Ala His Lys Ser Glu Val Ala 20 25 30

His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu 35 40 45

Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
50 60

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp 65 70 75 80

Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp 85 90 95

Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
100 105 110

Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln 115 120 125

- His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val 130 135 140
- Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys 145 150 155 160
- Lys Tyr Leu Tyr Glu Île Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro 165 170 175
- Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys 180 185 190
- Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu 195 200 205
- Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys 210 220
- Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val 225 230 235 240
- Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser 245 250 255
- Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly 260 265 270
- Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile 275 280 285
- Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu 290 295 300
- Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp 305 310 315 320
- Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser 325 330 335
- Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly 340 345 350
- Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val 355 360 365
- Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys 370 375 380
- Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu 385 390 395 400
- Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys 405 410 415
- Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu 420 425 430

Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val 435 440 445

Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His 450 455 460

Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val 465 470 475 480

Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
485 490 495

Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 500 505 510

Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 515 520 525

Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 530 535 540

Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 545 550 550 560

Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 570 575

Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 580 585 590

Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
595 600 605

Leu Trp Gly Pro Asp Ala Arg Gly Val Pro Val Ala Asp Gly Glu Phe 610 615 620

Ser Ser Glu Gln Val Ala Lys Ala Gly Gly Thr Trp Leu Gly Thr His 625 630 635 640

Arg Pro Leu Ala Arg Leu Arg Arg Ala Leu Ser Gly Pro Cys Gln Leu 645 655

Trp Ser Leu Thr Leu Ser Val Ala Glu Leu Gly Leu Gly Tyr Ala Ser 660 665 670

Glu Glu Lys Val Ile Phe Arg Tyr Cys Ala Gly Ser Cys Pro Arg Gly 675 680 685

Ala Arg Thr Gln His Gly Leu Ala Leu Ala Arg Leu Gln Gly Gln Gly 690 700

Arg Ala His Gly Gly Pro Cys Cys Arg Pro Thr Arg Tyr Thr Asp Val 705 710 715 720

Ala Phe Leu Asp Asp Arg His Arg Trp Gln Arg Leu Pro Gln Leu Ser 725 730 735

Ala Ala Cys Gly Cys Gly Gly 740

<210> 256

<211> 744

<212> PRT

<213> Homo sapiens

<400> 256

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala

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Tyr Ser Arg Ser Leu Asp Lys Arg Trp Gly Pro Asp Ala Arg Gly Val 20 25 30

Pro Val Ala Asp Gly Glu Phe Ser Ser Glu Gln Val Ala Lys Ala Gly 35 40

Gly Thr Trp Leu Gly Thr His Arg Pro Leu Ala Arg Leu Arg Arg Ala 50 60

Leu Ser Gly Pro Cys Gln Leu Trp Ser Leu Thr Leu Ser Val Ala Glu 65 70 75 80

Leu Gly Leu Gly Tyr Ala Ser Glu Glu Lys Val Ile Phe Arg Tyr Cys 85 90 95

Ala Gly Ser Cys Pro Arg Gly Ala Arg Thr Gln His Gly Leu Ala Leu 100 105 110

Ala Arg Leu Gln Gly Gln Gly Arg Ala His Gly Gly Pro Cys Cys Arg 115 120 125

Pro Thr Arg Tyr Thr Asp Val Ala Phe Leu Asp Asp Arg His Arg Trp 130 135 140

Gln Arg Leu Pro Gln Leu Ser Ala Ala Ala Cys Gly Cys Gly Gly Asp 145 150 155 160

Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu 165 170 175

Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln 180 185 190

Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe 195 200 205

Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser 210 220

Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg 225 230 235 240

Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu

Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr 310 315 Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys 330 Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val 395 His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser 425 Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu 455 Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln

Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr

545 555 Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln 570 Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val 585 Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala 600 Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu 615 Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr 645 650 Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile 665 Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu 680 Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala 710 Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala 725 730 Ala Ser Gln Ala Ala Leu Gly Leu 740 <210> 257 <211> 790 <212> PRT <213> Homo sapiens <400> 257 Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 10

Tyr Ser Arg Ser Leu Asp Lys Arg Asp Ala His Lys Ser Glu Val Ala

His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu

Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val

Lys 65	Leu	Val	Asn	Glu	Val 70	Thr	Glu	Phe	Ala	Lys 75	Thr	Cys	Val	Ala	Asp 80
Glu	Ser	Ala	Glu	Asn 85	Cys	Asp	Lys	Ser	Leu 90	His	Thr	Leu	Phe	G1y 95	Asp
Lys	Leu	Суѕ	Thr 100	Val	Ala	Thr	Leu	Arg 105	Glu	Thr	Tyr	Gly	Glu 110	Met	Ala
Asp	Cys	Cys 115	Ala	Lys	Gln	Glu	Pro 120	Glu	Arg	Asn	Glu	Cys 125	Phe	Leu	Gln
	130					135	Leu			•	140				
Asp 145	Val	Met	Cys	Thr	Ala 150	Phe	His	Asp	Asn	Glu 155	Glu	Thr	Phe	Leu	Lys 160
-	-			165		•	Arg		170	•	_			175	
			180				Arg	185					190		
	•	195					200					205			Glu
	210	•			_	215	Ser		,		220			-	
225				_	230		Glu			235					240
				245			Pro		250					255	
-			260	_				265	·	•			270		Gly
		275			•		280		•			285			Ile
-	290					295			-		300				Glu
305				-	310		His			315					320
		,		325					330					335	Ser
•			340	-				345			Ī		350		Gly
Met	Phe	Leu 355	_	Glu	Tyr	Ala	Arg 360	Arg	His	Pro	Asp	Tyr 365	Ser	Val	Val

Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu 425 Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val 440 Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val 465 470 475 Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 505 Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 520 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 535 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 545 550 555 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 570

œ,

Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys

Pro Pro Val Leu Ala Ser Pro Ala Gly His Leu Pro Gly Gly Arg Thr 625 630 635 635 640

Ala Arg Trp Cys Ser Gly Arg Ala Arg Arg Pro Pro Pro Gln Pro Ser

Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 580 585

Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
595 600 605

Leu Ser Leu Gly Ser Ala Pro Arg Ser Pro Ala Pro Arg Glu Gly Pro

645 650 655

Arg Pro Ala Pro Pro Pro Ala Pro Pro Ser Ala Leu Pro Arg Gly
660 665 670

Gly Arg Ala Arg Ala Gly Gly Pro Gly Ser Arg Ala Arg Ala Ala 675 680 685

Gly Ala Arg Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val Arg Ala 690 695 700

Leu Gly Leu Gly His Arg Ser Asp Glu Leu Val Arg Phe Arg Phe Cys 705 710 715 720

Ser Gly Ser Cys Arg Arg Ala Arg Ser Pro His Asp Leu Ser Leu Ala 725 730 735

Ser Leu Leu Gly Ala Gly Ala Leu Arg Pro Pro Pro Gly Ser Arg Pro 740 745 750

Val Ser Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe 755 760 765

Met Asp Val Asn Ser Thr Trp Arg Thr Val Asp Arg Leu Ser Ala Thr 770 780

Ala Cys Gly Cys Leu Gly 785 790

<210> 258

<211> 790

<212> PRT

<213> Homo sapiens

<400> 258

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10

Tyr Ser Arg Ser Leu Asp Lys Arg Ser Leu Gly Ser Ala Pro Arg Ser 20 25 30

Pro Ala Pro Arg Glu Gly Pro Pro Pro Val Leu Ala Ser Pro Ala Gly 35 40

His Leu Pro Gly Gly Arg Thr Ala Arg Trp Cys Ser Gly Arg Ala Arg 50 60

Arg Pro Pro Pro Gln Pro Ser Arg Pro Ala Pro Pro Pro Pro Ala Pro 65 70 75 80

Pro Ser Ala Leu Pro Arg Gly Gly Arg Ala Ala Arg Ala Gly Gly Pro 85 90 95

Gly Ser Arg Ala Arg Ala Ala Gly Ala Arg Gly Cys Arg Leu Arg Ser 100 105 110

Gln Leu Val Pro Val Arg Ala Leu Gly Leu Gly His Arg Ser Asp Glu 115 120 125

- Leu Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala Arg Ser 130 140
- Pro His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg 145 155 160
- Pro Pro Pro Gly Ser Arg Pro Val Ser Gln Pro Cys Cys Arg Pro Thr
- Arg Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr Trp Arg Thr
- Val Asp Arg Leu Ser Ala Thr Ala Cys Gly Cys Leu Gly Asp Ala His
  195 200 205
- Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe 210 215 220
- Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro 235 235
- Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys 255
- Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His 260 265 270
- Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr 275 280 285
- Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn 290 295 300
- Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu 305 310 315 320
- Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu 325 330 335
- Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro
- Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala 355 360 365
- Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu 370 375 380
- Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys 385 390 395 400
- Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe
  405 410 415
- Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu
  420 425 430

- Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr 435 440 445
- Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp 450 455 460
- Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu 465 470 475 480
- Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala 485 490 495
- Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala 500 505 510
- Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys 515 520 525
- Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro 530 535 540
- Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr 545 550 555 560
- Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala 565 570 575
- Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu 580 585 590
- Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe 595 600 605
- Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser 610 615 620
- Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser 625 630 635 640
- Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp 645 650 655
- Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr 660 665 670
- Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn 675 680 685
- Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro 690 695 700
- Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr 705 710 715 720
- Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu
  725 730 735

Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val 740 745 750

Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp 755 760 765

Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser 770 775 780

Gln Ala Ala Leu Gly Leu 785 790

<210> 259

<211> 790

<212> PRT

<213> Homo sapiens

<400> 259

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10 15

Tyr Ser Arg Ser Leu Asp Lys Arg Asp Ala His Lys Ser Glu Val Ala 20 25 30

His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
35 40 45

Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp 65 70 75 80

Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
85 90 95

Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
100 105 110

Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln 115 120 125

His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val 130 135 140

Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys 145 150 155 160

Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro 165 170 175

Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys 180 185 190

Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu

200 205 Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys 215 Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser 245 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly 265 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile 280 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp 310 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser 330 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly 345 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val 360 Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu 390 395 Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys 410 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu 425 Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val 470 475 Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg 490 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe

500

505

510

- Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 515 520 525
- Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 530 535 540
- Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 545 550 555 560
- Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 570 575
- Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 580 585 590
- Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly 595 605
- Leu Ser Leu Gly Ser Ala Pro Arg Ser Pro Ala Pro Arg Glu Gly Pro 610 620
- Pro Pro Val Leu Ala Ser Pro Ala Gly His Leu Pro Gly Gly Arg Thr 625 635 635
- Ala Arg Trp Cys Ser Gly Arg Ala Arg Arg Pro Pro Pro Gln Pro Ser 645 650 655
- Arg Pro Ala Pro Pro Pro Pro Ala Pro Pro Ser Ala Leu Pro Arg Gly
- Gly Arg Ala Arg Ala Gly Gly Pro Gly Ser Arg Ala Arg Ala Ala 675 680 685
- Gly Ala Arg Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val Arg Ala
  690 695 700
- Leu Gly Leu Gly His Arg Ser Asp Glu Leu Val Arg Phe Arg Phe Cys
  705 710 715 720
- Ser Gly Ser Cys Arg Arg Ala Arg Ser Pro His Asp Leu Ser Leu Ala 735
- Ser Leu Leu Gly Ala Gly Ala Leu Arg Pro Pro Pro Gly Ser Arg Pro 740 745 750
- Val Ser Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe
  755 760 765
- Met Asp Val Asn Ser Thr Trp Arg Thr Val Asp Arg Leu Ser Ala Thr 770 775 780
- Ala Cys Gly Cys Leu Gly 785 790

<210> 260

<211> 790

<212> PRT

<213> Homo sapiens

<400> 260

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10 15

Tyr Ser Arg Ser Leu Asp Lys Arg Ser Leu Gly Ser Ala Pro Arg Ser 20 25 30

Pro Ala Pro Arg Glu Gly Pro Pro Pro Val Leu Ala Ser Pro Ala Gly 35 40 45

His Leu Pro Gly Gly Arg Thr Ala Arg Trp Cys Ser Gly Arg Ala Arg
50 55 60

Arg Pro Pro Pro Gln Pro Ser Arg Pro Ala Pro Pro Pro Pro Ala Pro 65 70 75 80

Pro Ser Ala Leu Pro Arg Gly Gly Arg Ala Ala Arg Ala Gly Gly Pro 85 90 95

Gly Ser Arg Ala Arg Ala Ala Gly Ala Arg Gly Cys Arg Leu Arg Ser 100 105 110

Gln Leu Val Pro Val Arg Ala Leu Gly Leu Gly His Arg Ser Asp Glu 115 120 125

Leu Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala Arg Ser 130 140

Pro His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg 145 150 155 160

Pro Pro Pro Gly Ser Arg Pro Val Ser Gln Pro Cys Cys Arg Pro Thr
165 170 175

Arg Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr Trp Arg Thr 180 185 190

Val Asp Arg Leu Ser Ala Thr Ala Cys Gly Cys Leu Gly Asp Ala His 195 200 205

Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe 210 215 220

Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro 225 230 235 240

Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys 245 250 255

Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His 260 265 270

Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr 280 Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu 310 315 Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu 325 Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro 345 Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala 360 Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu 375 Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys 390 Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe 405 Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala 490 Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys 520 Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr 550 Thr Leu Glu Lys Cys Cys Ala Ala Asp Pro His Glu Cys Tyr Ala 565

WO 2005/003296 PCT/US2004/001369.

Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu 580 585 590

Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe 595 600 605

Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser . 610 615 620

Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser 625 630 635 640

Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp 645 650 655

Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr 660 665 670

Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn 675 680 685

Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro 690 695 700

Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr 705 710 715 720

Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu 725 730 735

Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val 740 745 750

Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp 755 760 765

Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser 770 780

Gln Ala Ala Leu Gly Leu 785 790

<210> 261

<211> 790

<212> PRT

<213> Homo sapiens

<400> 261

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10 15

Tyr Ser Arg Ser Leu Asp Lys Arg Asp Ala His Lys Ser Glu Val Ala 20 25 30

His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala 105 Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln 120 His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val 135 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro 170 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp 305 310 315 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser

330

325

- Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly 340 345 350
- Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val 355 360 365
- Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys 370 375 380
- Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu 385 390 395
- Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys 405 410 415
- Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu 420 425 430
- Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val 435 440 445
- Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His 450 455 460
- Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val 465 470 475 480
- Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg 485 490 495
- Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 500 505 510
- Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 515 520 525
- Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 530 535 540
- Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 545 550 555 560
- Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 570 575
- Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 580 585 590
- Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly 595 600 605
- Leu Ser Leu Gly Ser Ala Pro Arg Ser Pro Ala Pro Arg Glu Gly Pro 610 615 620
- Pro Pro Val Leu Ala Ser Pro Ala Gly His Leu Pro Gly Gly Arg Thr 625 630 635 640

Ala Arg Trp Cys Ser Gly Arg Ala Arg Arg Pro Pro Pro Gln Pro Ser 645 650 655

Arg Pro Ala Pro Pro Pro Pro Ala Pro Pro Ser Ala Leu Pro Arg Gly
660 665 670

Gly Arg Ala Ala Arg Ala Gly Gly Pro Gly Ser Arg Ala Arg Ala Ala 675 680 685

Gly Ala Arg Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val Arg Ala 690 695 700

Leu Gly Leu Gly His Arg Ser Asp Glu Leu Val Arg Phe Arg Phe Cys 705 710 715 720

Ser Gly Ser Cys Arg Arg Ala Arg Ser Pro His Asp Leu Ser Leu Ala 725 730 735

Ser Leu Leu Gly Ala Gly Ala Leu Arg Pro Pro Pro Gly Ser Arg Pro 740 745 750

Val Ser Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe 755 760 765

Met Asp Val Asn Ser Thr Trp Arg Thr Val Asp Arg Leu Ser Ala Thr 770 780

Ala Cys Gly Cys Leu Gly 785 790

<210> 262

<211> 790

<212> PRT

<213> Homo sapiens

<400> 262

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10

Tyr Ser Arg Ser Leu Asp Lys Arg Ser Leu Gly Ser Ala Pro Arg Ser 20 25 30

Pro Ala Pro Arg Glu Gly Pro Pro Pro Val Leu Ala Ser Pro Ala Gly
35 40 45

His Leu Pro Gly Gly Arg Thr Ala Arg Trp Cys Ser Gly Arg Ala Arg 50 55 60

Arg Pro Pro Pro Gln Pro Ser Arg Pro Ala Pro Pro Pro Pro Ala Pro 65 . 70 . 75 . 80

Pro Ser Ala Leu Pro Arg Gly Gly Arg Ala Ala Arg Ala Gly Gly Pro 85 90 95

Gly Ser Arg Ala Arg Ala Ala Gly Ala Arg Gly Cys Arg Leu Arg Ser

105 Gln Leu Val Pro Val Arg Ala Leu Gly Leu Gly His Arg Ser Asp Glu 120 Leu Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala Arg Ser Pro His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg Pro Pro Pro Gly Ser Arg Pro Val Ser Gln Pro Cys Cys Arg Pro Thr 170 Arg Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr Trp Arg Thr 185 Val Asp Arg Leu Ser Ala Thr Ala Cys Gly Cys Leu Gly Asp Ala His 200 Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe 215 Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro 225 230 235 Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys 250 Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His 265 Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr 280 Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn 295 300 Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu 325 330 Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala 355 360 Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu 375 Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe

• •			·	405					410					415	
Lys	Ala	Trp	Ala 420	Va1	Ala	Arg	Leu	Ser 425	Gln	Arg	Phe	Pro	Lys 430	Ala	Glu
Phe	Ala	Glu 435	Val	Ser	Lys	Leu	Val 440	Thr	Asp	Leu	Thr	Lys 445	Val	His	Thr
Glu	Cys 450	Cys	His	Gly	Asp	Leu 455	Leu	Glu	Cys	Ala	Asp 460	Asp	Arg	Ala	Asp
Leu 465	Ala	Lys	Tyr	Ile	Cys 470	Glu	Asn	Gln	Asp	Ser 475	Ile	Ser	Ser	Lys	Leu 480
Lys	Glu	Cys	Cys	Glu 485	Lys	Pro	Leu	Leu	Glu 490	Lys	Ser	His	Cys	Ile 495	Ala
Glu	Val	Glu	Asn 500	Asp	Glu	Met	Pro	Ala 505	Asp	Leu	Pro	Ser	Leu 510		Ala
Asp	Phe	Val 515	Glu	Ser	Lys	Asp	Val 520	Cys	Lys	Asn	Tyr	Ala 525	Glu	Ala	Lys
Asp	Val 530	Phe	Leu	Gly	Met	Phe 535	Leu	Tyr	Glu	Tyr	Ala 540	Arg	Arg	His	Pro
Asp 545	Tyr	Ser	Val	Val	Leu 550	Leu	Leu	Arg	Leu	Ala 555	Lys	Thr	Tyr	Glu	Thr 560
*	Leu			565					570					575	
	Val		580					585					590		
٠.	Lys	595					600					605		_	
	Asn 610					615					620				
Thr	Pro	Thr	Leu	Val	Glu	Val	Ser	Arg	Asn	Leu	Gly	Lys	Val	Gly	Ser

Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr 660 665 670

Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp

650

Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn 675 680 685

Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro 690 695 700

Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr

705 710 715 Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu 725 730 Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp 760 Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser 775 . Gln Ala Ala Leu Gly Leu <210> 263 <211> 739 <212> PRT <213> Homo sapiens <400> 263 Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 10 Tyr Ser Arg Ser Leu Asp Lys Arg Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala 100 Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln 120 His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys 145 150 155 160 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro

170

165

Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys 185 Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu 205 200 195 Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val 230 · 235 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly 265 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile 280 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly 345 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys 405 410 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu 425 Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val 440 Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg 485 490 495

Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 500 505 510

Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 515 520 525

Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 530 535 540

Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 545 550 560

Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 570 575

Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 580 585 590

Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly 595 600 605

Leu Gly Val Ser Glu Thr Ala Pro Ala Ser Arg Arg Gly Glu Leu Ala 610 615 620

Val Cys Asp Ala Val Ser Gly Trp Val Thr Asp Arg Arg Thr Ala Val 625 630 635 640

Asp Leu Arg Gly Arg Glu Val Glu Val Leu Gly Glu Val Pro Ala Ala 645 650 655

Gly Gly Ser Pro Leu Arg Gln Tyr Phe Phe Glu Thr Arg Cys Lys Ala 660 665 670

Asp Asn Ala Glu Glu Gly Gly Pro Gly Ala Gly Gly Gly Cys Arg 675 680 685

Gly Val Asp Arg Arg His Trp Val Ser Glu Cys Lys Ala Lys Gln Ser 690 695 700

Tyr Val Arg Ala Leu Thr Ala Asp Ala Gln Gly Arg Val Gly Trp Arg 705 710 715 720

Trp Ile Arg Ile Asp Thr Ala Cys Val Cys Thr Leu Leu Ser Arg Thr 725 730 735

Gly Arg Ala

<210> 264

<211> 739

<212> PRT

<213> Homo sapiens

<400> 264

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10 15

Tyr Ser Arg Ser Leu Asp Lys Arg Gly Val Ser Glu Thr Ala Pro Ala
20 25 30

Ser Arg Arg Gly Glu Leu Ala Val Cys Asp Ala Val Ser Gly Trp Val 35 40 45

Thr Asp Arg Arg Thr Ala Val Asp Leu Arg Gly Arg Glu Val Glu Val 50 60

Leu Gly Glu Val Pro Ala Ala Gly Gly Ser Pro Leu Arg Gln Tyr Phe
65 70 75 80

Phe Glu Thr Arg Cys Lys Ala Asp Asn Ala Glu Glu Gly Gly Pro Gly 85 90 95

Ala Gly Gly Gly Cys Arg Gly Val Asp Arg Arg His Trp Val Ser 100 105 110

Glu Cys Lys Ala Lys Gln Ser Tyr Val Arg Ala Leu Thr Ala Asp Ala 115 120 125

Gln Gly Arg Val Gly Trp Arg Trp Ile Arg Ile Asp Thr Ala Cys Val 130 135 140

Cys Thr Leu Leu Ser Arg Thr Gly Arg Ala Asp Ala His Lys Ser Glu 145 150 155 160

Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu 165 170 175

Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp 180 185 190

His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val 195

Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe 210 215 220

Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu 225 230 235 240

Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe 245 250 255

Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro 265 270

Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe 275 280 285

- Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr 290 295 300
  - Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr 305 310 315 320
  - Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu 325 330 335
  - Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu 340 345 350
  - Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp 355 360 365
  - Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu 370 375 380
  - Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys 385 390 395 400
  - His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys 405 410 415
- Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys 420 425 430
- Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu 435 440 445
- Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val
- Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe 465 470 475 480
- Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser 485 490 495
- Val Val Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu
  500 505 510
- Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe 515 520 525
- Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln 530 540
- Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala 545 550 560
- Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr 565 570 575
- Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys 580 585 590

Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser 595 600 605

Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser 610 615 620

Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro 625 630 635 640

Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe 645 650 655

Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu 660 665 670

Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys 675 680 685

His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp 690 695 700

Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr 705 710 715 720

Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala 725 730 735

Leu Gly Leu

<210> 265

<211> 637

<212> PRT

<213> Homo sapiens

<400> 265

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala  $1 \hspace{1.5cm} 5 \hspace{1.5cm} 10 \hspace{1.5cm} 15$ 

Tyr Ser Arg Ser Leu Asp Lys Arg Asp Ala His Lys Ser Glu Val Ala 20 25 30

His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu  $35\,$  40  $45\,$ 

Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val $50 \hspace{1.5cm} 60$ 

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp 65 70 75 80

Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp 85 90 95

Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala

L00	105	110

Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln 115 120 125

His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val 130 135 140

Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys 145 150 155 160

Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro 165 170 175

Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys 180 185 190

Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu 195 200 205

Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys 210 225 220

Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val 225 230 235 240

Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser 245 250 255

Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly 260 265 270

Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile 275 280 285

Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu 290 295 300

Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp 305 310 315 320

Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser 325 330 335

Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly 340 345

Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val 355 365

Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys 370 375 380

Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu 385 390 395 400

Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys

405

410

415

Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu 420 425 430

Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val 435 440 445

Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His
450 455 460

Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val 465 470 475 480

Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg 485 490 495

Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 500 510

Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 515 520 525

Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 530 535 540

Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 545 550 555 560

Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 570 575

Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 580 585 590

Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly 595 600 605

Leu His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys 610 615 620

Gln Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn 625 635

<210> 266

<211> 637

<212> PRT

<213> Homo sapiens

<400> 266

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10 15

Tyr Ser Arg Ser Leu Asp Lys Arg His Ser Asp Ala Val Phe Thr Asp 20 25 30

Asn	Tyr	35	Arg	Leu	Arg	гÀг	40	met	ΥTG	vai	rys	45	ıyı	ren	ASII
Ser	Ile 50	Leu	Asn	Asp	Ala	His 55	Lys	Ser	Glu	Val	Ala 60	His	Arg	Phe	Lys
<b>Asp</b> 65.	Leu	Gly	Glu	Glu	Asn 70	Phe	Lys	Ala	Leu	Val 75		Ile	Ala	Phe	Ala 80
Gln	Tyr	Leu	Gln	Gln 85	Cys	Pro	Phe	Glu	Asp 90	His	<b>Val</b>	Lys	Leu	Val 95	Asn
Glu	Val	Thr	Glu 100	Phe	Ala	Lys	Thr	Cys 105	Val	Ala	Asp	Glu	Ser 110	Ala	Glu
Asn	Cys	Asp 115	Lys	Ser	Leu	His	Thr 120	Leu	Phe	Gly	Asp	Lys 125	Leu	Cys	Thr
Val	Ala 130	Thr	Leu	Arg	Glu	Thr 135	Tyr	Gly	Glu	Met	Ala 140	Asp	Cys	Cys	Ala
Lys 145	Gln	Glu	Pro	Glu	Arg 150	Asn	Glu	Cys	Phe	Leu 155	Gln	His	Lys	Asp	Asp 160
Asn	Pro	Asn	Leu	Pro 165	Arg	Leu	Val	Arg	Pro. 170	Glu	Val	Asp	Val	Met 175	Cys
Thr	Ala	Phe	His 180	Asp	Asn	Glu	Glu	Thr 185	Phe	Leu	Lys	Lys	Tyr 190	Leu	Tyr
Glu	Ile	Ala 195	Arg	Arg	His	Pro	Туг 200	Phe	Tyr	Ala	Pro	Glu 205	Leu	Leu	Phe
Phe	Ala 210	Lys	Arg	Tyr	Lys	Ala 215	Ala	Phe	Thr	Glu	Cys 220	Cys	Gln	Ala	Ala
Asp 225	Lys	Ala	Ala	Cys	Leu 230	Leu	Pro	Lys	Leu	Asp 235	Glu	Leu	Arg	Asp	G1u 240
Gly	Lys	Ala	Ser	Ser 245	Ala	Lys	Gln	Arg	Leu 250	Lys	Cys	Ala	Ser	Leu 255	Gln
Lys	Phe	Gly	G1u 260	Arg	Ala	Phe	Lys	Ala 265	Trp	Ala	Val	Ala	Arg 270	Leu	Ser
Gln	Ārg	Phe 275		Lys			Phe 280		Glu	Val	Ser	Lys 285		Val	Thr
Asp	Leu 290	Thr	Lys	Val	His	Thr 295	Glu	Суз	Суѕ	His	Gly 300	Asp	Leu	Leu	Glu
Cys 305	Ala	Asp	Asp	Arg	Ala 310	_	Leu	Ala	Lys	Tyr 315	Ile	Cys	Glu	Asn	Gln 320
Asp	Ser	Ile	Ser	Ser 325	_	Leu	Lys	Glu	Cys 330		Glu	Lys	Pro	Leu 335	Leu

Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala 345 Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys 360 Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg 390 Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala 410 Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu 425. Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu 440 Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr 455 Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg 470 475 Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu 505 Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr 550 Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr 585 Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly 615 Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu

<210> 267 <211> 636 <212> PRT <213> Homo sapiens <400> 267 Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala Tyr Ser Arg Ser Leu Asp Lys Arg Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu 40 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp 65 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp 90 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val 135 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys 145 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val 225

Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser

245

250

Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly 260 265 270

- Asp Leu Clu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile 275 280 285
- Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu 290 295 300
- Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp 305 310 310
- Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser 325 330 335
- Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly 340 345 350
- Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val 355 360 365
- Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys 370 375 380
- Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu 385 390 395 400
- Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys 405 410 415
- Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu 420 425 430
- Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val 435 440 445
- Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His 450 455 460
- Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val 465 470 475 480
- Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg 485 490 495
- Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 500 505 510
- Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 515 520 525
- Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 530 535 540
- Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 545 550 555 560

Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 570 575

Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 580 585 590

Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
595 600 605

Leu His Ser Asp Gly Thr Phe Thr Ser Glu Leu Ser Arg Leu Arg Glu 610 615 620

Gly Ala Arg Leu Gln Arg Leu Leu Gln Gly Leu Val 625 630 635

<210> 268

<211> 636

<212> PRT

<213> Homo sapiens

<400> 268

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10 15

Tyr Ser Arg Ser Leu Asp Lys Arg His Ser Asp Gly Thr Phe Thr Ser 20 25 30

Glu Leu Ser Arg Leu Arg Glu Gly Ala Arg Leu Gln Arg Leu Leu Gln 35 40 45

Gly Leu Val Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp 50 55 60

Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln 65 70 75 80

Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu 85 90 95

Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn 100 105 110

Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val 115 120 125

Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys 130 135 140

Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asn 145 150 155 160

Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr
165 170 175

Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu

180 185 Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe 200 Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly 225 230 235 Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys 250 Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln 265 Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys 295 Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp 345 Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu 390 Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln 440 Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys 455 Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn 470 Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg

485 . 490 . 495

Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys 500 505 510

Val Leu His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys 515 520 525

Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val 530 535 540

Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe 545 550 555 560

His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys 565 570 575

Gln Thr Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys 580 585 590

Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys 595 600 605

Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys 610 620

Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu 625 630 635

<210> 269

<211> 729

<212> PRT

<213> Homo sapiens

<400> 269

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10 15

Tyr Ser Arg Ser Leu Asp Lys Arg Asp Ala His Lys Ser Glu Val Ala 20 25 30

His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu 35 40 45

Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
50 60

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp 65 70 75 80

Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp 85 90 95

Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala 100 105 110

.Asp	_	115	Ala	гуѕ	GIN	GIU	120	GIU	Arg	ASI	GIU	125	rne	Leu	GIN
His	Lys 130	Asp	Asp	Asn	Pro	Asn 135	Leu	Pro	Arg	Leu	Val 140	Arg	Pro	Glu	Val
Asp 145	Val	Met	Cys	Thr	Ala 150	Phe	His	Asp	Asn	Glu 155	Glu	Thr	Phe	Leu	Lys 160
Lys	Tyr	Leu	Tyr	Glu 165	Ile	Ala	Arg	Arg	His 170	Pro	Tyr	Phe	Tyr	Ala 175	Pro
Glu	Leu	Leu	Phe 180	Phe	Ala	Lys	Arg	Tyr 185	Lys	Ala	Ala		Thr 190	Glu	Cys
Cys	Gln	Ala 195	Ala	Asp	Lys	Ala	Ala 200	Cys	Leu	Leu	Pro	Lys 205	Leu	Asp	Glu
Leu	Arg 210	Asp	Glu	Gly	Lys	Ala 215	Ser	Ser	Ala	Lys	Gln 220	Arg	Leu	Lys	Cys
Ala 225	Ser.	Leu	Gln	Lys	Phe 230	Gly	Glu	Arg	Ala	Phe 235	Lys	Ala	Trp	Alà	Va1 240
Ala	Arg	Leu	Ser	Gln 245	Arg	Phe	Pro	Lys	Ala 250	Glu	Phe	Ala	Glu	Val 255	Ser
Lys	Leu	Val	Thr 260	Asp	Leu	Thr	Lys	Va1 265	His	Thr	Glu	Cys	Cys 270	His	Gly
Asp	Leu	Leu 275	Glu	Cys	Ala	Asp	Asp 280	Arg	Ala	Asp	Leu	Ala 285	Lys	Tyr	Ile
Cys	Glu 290	Asn	Gln	Asp	Ser	Ile 295	Ser	Ser	Lys	Leu	Lys 300	Glu	Cys	Cys	Glu
Lys 305	Pro	Leu	Leu	Glu	Lys 310	Ser	His	Cys	Ile	Ala 315	Glu	Val	Glu	Asn	Asp 320
Glu	Met	Pro	Ala	Asp 325	Leu	Pro	Ser	Leu	Ala 330	Ala	Asp	Phe	Val	Glu 335	Ser
Lys	Asp	Val	Cys 340	Lys	Asn	Tyr	Ala	Glu 345	Ala	Lys	Asp	Val	Phe 350	Leu	Gly
Met	Phe	Leu 355	_	Glu	Tyr		Arg 360	_	His	Pro	Asp	<b>Tyr</b> 365	Ser	Val	Val
Leu	Leu 370	Leu	Arg	Leu	Ala	Lys 375	Thr	Tyr	Glu	Thr	Thr 380	Leu	Glu	Lys	Cys
Cys 385	Ala	Ala	Ala	Asp	Pro 390	His	Glu	Cys	Tyr	Ala 395	Lys	Val	Phe	-	Glu 400
Phe	Lys	Pro	Leu	Val 405	Glu	Glu	Pro	Gln	Asn 410	Leu	Ile	Lys	Gln	Asn 415	Суѕ

Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu 425 Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val 475 Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 520 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 555 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 585 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu Ser Ser His Pro Ile Phe His Arg Gly Glu Phe Ser Val Cys 615 Asp Ser Val Ser Val Trp Val Gly Asp Lys Thr Thr Ala Thr Asp Ile Lys Gly Lys Glu Val Met Val Leu Gly Glu Val Asn Ile Asn Asn Ser 645 650 Val Phe Lys Gln Tyr Phe Phe Glu Thr Lys Cys Arg Asp Pro Asn Pro 665 Val Asp Ser Gly Cys Arg Gly Ile Asp Ser Lys His Trp Asn Ser Tyr 680 Cys Thr Thr Thr His Thr Phe Val Lys Ala Leu Thr Met Asp Gly Lys Gln Ala Ala Trp Arg Phe Ile Arg Ile Asp Thr Ala Cys Val Cys Val

Leu Ser Arg Lys Ala Val Arg Arg Ala 725

<210> 270 <211> 729 <212> PRT <213> Homo sapiens <400> 270 Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala Tyr Ser Arg Ser Leu Asp Lys Arg Ser Ser Ser His Pro Ile Phe His Arg Gly Glu Phe Ser Val Cys Asp Ser Val Ser Val Trp Val Gly Asp Lys Thr Thr Ala Thr Asp Ile Lys Gly Lys Glu Val Met Val Leu Gly Glu Val Asn Ile Asn Asn Ser Val Phe Lys Gln Tyr Phe Phe Glu Thr Lys Cys Arg Asp Pro Asn Pro Val Asp Ser Gly Cys Arg Gly Ile Asp Ser Lys His Trp Asn Ser Tyr Cys Thr Thr Thr His Thr Phe Val Lys Ala Leu Thr Met Asp Gly Lys Gln Ala Ala Trp Arg Phe Ile Arg Ile 120 Asp Thr Ala Cys Val Cys Val Leu Ser Arg Lys Ala Val Arg Arg Ala Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu 150 155 Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln 170 Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu 185 Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro 235

Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asn Pro Asn Leu 245 250 255

- Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His 260 265 270
- Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg 275 280 285
- Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg 290 295 300
- Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala 305 310 315 320
- Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser 325 330 335
- Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu 340 345 350
- Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro 355 360 365
- Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys 370 375 380
- Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp 385 390 395 400
- Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser 405 410 415
- Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His
  420 425 430
- Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser 435 440 445
- Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala 450 455 460
- Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg 465 470 475 480
- Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr
  485 490 495
- Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu 500 505 510
- Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro 515 520 525
- Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu 530 535 540

Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro 545 550 555 560

Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys 565 570 575

Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys 580 585 590

Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His 595 600 605

Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser 610 615 620

Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr 625 630 635 640

Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp 645 650 655

Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala 660 665 670

Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu 675 680 685

Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys 690 695 700

Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val 705 710 715 720

Ala Ala Ser Gln Ala Ala Leu Gly Leu 725

<210> 271

<211> 729

<212> PRT

<213> Homo sapiens

<400> 271

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10

Tyr Ser Arg Ser Leu Asp Lys Arg Asp Ala His Lys Ser Glu Val Ala 20 25 30

His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu 35 40

Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val 50 55 60

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp

6	5				70	)				7	5				80
G1	u Se	r Al	a Gl	u Ası 8!	n Cys	s As	р Lу	s Se	r Le	u Hi: O	s Thi	r Le	u Phe	Gl <sub>3</sub> 95	y Asp
Ly	s Le	u Cy	s Thi	r Val	l Ala	Th	r Lei	1 Ar	g Glu 5	u Thi	г Тул	r Gly	7 Glu 110		: Ala
As	р Су:	s Cy 11	s Ala 5	Lys	s Gln	Gli	120	G1:	u Arg	j Ası	ı Glı	1 Cys		Leu	Gln
Hi	130	s As <sub>i</sub> )	p Asp	) Asr	Pro	13:	n Leu 5	ı Pro	Arg	J Let	1 Va]		Pro	Glu	val
14.					150					155	5				Lys 160
Ly	з Туз	Le	ı Tyr	165	Ile	Ala	a Arg	Arg	170	Pro	Туг	Phe	туг	Ala 175	Pro
Glı	ı Lev	ı Leı	2 Phe 180	Phe	Ala	Lys	Arg	Туг 185	Lys	Ala	Ala	Phe	Thr 190	Glu	Cys
Суз	Glr	195	a Ala	Asp	Lys	Ala	Ala 200	Cys	Leu	Leu	Pro	Lys 205	Leu	Asp	Glu
Leu	210	Asp	) Glu	Gly	Lys	Ala 215	Ser	Ser	Ala	Lys	Gln 220		Leu	Lys	Cys
Ala 225	Ser	Leu	Gln	Lys	Phe 230	Gly	Glu	Arg	Ala	Phe 235	Lys	Ala	Trp	Ala	Val 240
Ala	Arg	Leu	Ser	Gln 245	Arg	Phe	Pro	Lys	Ala 250	Glu	Phe	Ala	Glu	Val 255	Ser
Lys	Leu	Val	Thr 260	Asp	Leu	Thr	Lys	Val 265	His	Thr	Glu	Суѕ	Cys 270	His	Gly
Asp	Leu	Leu 275	Glu	Cys	Ala	Asp	Asp 280	Arg	Ala	Asp	Leu	Ala 285	Lys	Tyr	Ile
Cys	Glu 290	Asn	Gln	Asp	Ser	Ile 295	Ser	Ser	Lys	Leu	Lys 300	Glu	Cys	Cys	Glu
Lys 305	Pro	Leu	Leu	Glu	Lys 310	Ser	His	Cys	Ile	Ala 315	Glu	Val	Glu .	Asn	Asp 320
Glu	Met	Pro	Ala	Asp 325	Leu	Pro	Ser	Leu	Ala 330	Ala	Asp	Phe	Val	Glu 335	Ser
Lys	Asp	Val	Cys 340	Lys	Asn	Tyr	Ala	Glu 345	Ala	Lys	Asp	Val	Phe :	Leu	Gly
Met	Phe	Leu 355	Tyr	Glu	Tyr	Ala	Arg 360	Arg	His	Pro	Asp	Tyr 365	Ser \	Val.	Val
Leu	Leu	Leu	Arg	Leu	Ala :	Lys	Thr	Tyr	Glu	Thr	Thr	Leu	Glu 1	Lys	Cys

370 380 Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu 425 Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val 440 Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 505 Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 520 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 535 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 545 555 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 570 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 585 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu Ser Ser Ser His Pro Ile Phe His Arg Gly Glu Phe Ser Val Cys 615 Asp Ser Val Ser Val Trp Val Gly Asp Lys Thr Thr Ala Thr Asp Ile 625 Lys Gly Lys Glu Val Met Val Leu Gly Glu Val Asn Ile Asn Asn Ser Val Phe Lys Gln Tyr Phe Phe Glu Thr Lys Cys Arg Asp Pro Asn Pro Val Asp Ser Gly Cys Arg Gly Ile Asp Ser Lys His Trp Asn Ser Tyr

675

680

685

Cys Thr Thr Thr His Thr Phe Val Lys Ala Leu Thr Met Asp Gly Lys 690 695 700

Gln Ala Ala Trp Arg Phe Ile Arg Ile Asp Thr Ala Cys Val Cys Val 705 710 715 720

Leu Ser Arg Lys Ala Val Arg Arg Ala 725

<210> 272

<211> 729

<212> PRT

<213> Homo sapiens

<400> 272

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10 15

Tyr Ser Arg Ser Leu Asp Lys Arg Ser Ser Ser His Pro Ile Phe His
20 25 30

Arg Gly Glu Phe Ser Val Cys Asp Ser Val Ser Val Trp Val Gly Asp 35 40 45

Lys Thr Thr Ala Thr Asp Ile Lys Gly Lys Glu Val Met Val Leu Gly 50 55 60

Glu Val Asn Ile Asn Asn Ser Val Phe Lys Gln Tyr Phe Phe Glu Thr 65 70 75 80

Lys Cys Arg Asp Pro Asn Pro Val Asp Ser Gly Cys Arg Gly Ile Asp 85 90 95

Ser Lys His Trp Asn Ser Tyr Cys Thr Thr Thr His Thr Phe Val Lys
100 105 110

Ala Leu Thr Met Asp Gly Lys Gln Ala Ala Trp Arg Phe Ile Arg Ile 115 120 125

Asp Thr Ala Cys Val Cys Val Leu Ser Arg Lys Ala Val Arg Arg Ala 130 135 140

Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu 145 150 155 160

Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln
165 170 175

Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu 180 185 190

Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys 195 200 205

ser	210	urs	TIIL	Den	rne	215	vsħ	шуз	Deu	CJS	220	VUI	A,u		БСС
Arg 225	Glu	Thr	Tyr	Gly	Glu 230	Met	Ala	Asp	Cys	Cys 235	Ala	Lys	Gln	Glu	Pro 240
Glu	Arg	Asn	Glu	Cys 245	Phe	Leu	Gln	His	Lys 250	Asp	Asp	Asn	Pro	Asn 255	Leu
Pro	Arg	Leu	Val 260	Arg	Pro	Glu	Val	Asp 265	Val	Met	Cys	Thr	Ala 270	Phe	His
Asp	Asn	Glu 275		Thr	Phe	Leu	Lys 280	Lys	Tyr	Leu	Tyr	G1u 285	Ile	Ala	Arg
Arg	His 290	Pro	Tyr	Phe	Tyr	Ala 295	Pro	Glu	Leu	Leu	Phe 300	Phe	Ala	Lys	Arg
Tyr 305	Lys	Ala	Ala	Phe	Thr 310	Glu	Cys	Cys	Gln	Ala 315	Ala	Asp	Lys	Ala	Ala 320
Суз	Leu	Leu	Pro	Lys 325	Leu	Asp	Glu	Leu	Arg 330	Asp	Glu	Gly	Lys	Ala 335	Ser
Ser	Ala	Lys	Gln 340	Arg	Leu	Lys	Cys	Ala 345	Ser	Leu	Gln	Lys	Phe 350	Gly	Glu
Arg	Ala	Phe 355	Lys	Ala	Trp	Ala	Val 360	Ala	Arg	Leu	Ser	Gln 365	Arg	Phe	Pro
Lys	Ala 370	Glu	Phe	Ala	Glu	Val 375	Ser	Lys	Leu	Val	Thr 380	Asp	Leu	Thr	Lys
Val 385	His	Thr	Glu	Cys	Cys 390	His	Gly	Asp	Leu	Leu 395	Glu	Cys	Ala	Asp	Asp 400
Arg	Ala	Asp		Ala 405		Tyr			Glu 410	Asn	Gln	Asp	Ser	Ile 415	
Ser	Lys	Leu	Lys 420	Gļu	Cys	Cys	Glu	Lys 425	Pro	Leu	Leu	Glu	Lys 430	Ser	His
Cys	Ile	Ala 435		Val	Glu	Asn	Asp 440	Glu	Met	Pro	Ala	Asp 445	Leu	Pro	Ser
Leu	Ala 450		Asp	Phe	Val	G1u 455		Lys	Asp	Val	Cys 460	Lys	Asn	Tyr	Ala
Glu 465	Ala	Lys	Asp	Val	Phe 470	Leu	Gly	Met	Phe	Leu 475	Tyr	Glu	Tyr	Äla	Arg 480
Arg	His	Pro	Asp	Tyr 485		Val	Val	Leu	Leu 490	Leu	Arg	Leu	Ala	Lys 495	Thr
	Glu	Thr	Thr 500	Leu	Glu	Lys	Cys	Cys 505	Ala	Ala	Ala	Asp	Pro 510	His	Glu

Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro 520 Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro 550 555 Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala 665 Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val 710 715 Ala Ala Ser Gln Ala Ala Leu Gly Leu 725

<210> 273 <211> 678 <212> PRT <213> Homo sapiens

<400> 273
Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
1 5 10 15

Tyr Ser Arg Ser Leu Asp Lys Arg Asp Ala His Lys Ser Glu Val Ala 20 25 30

His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp 90 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala 105 Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln 120 His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys 150 155 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro 170 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val 225 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser 250 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly 265 . Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu 295 Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser 330

Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly 340 345 350

- Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val 355 360 365
- Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys 370 375 380
- Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu 385 390 395 400
- Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys 405 410 415
- Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu 420 425 430
- Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val 435 440 445
- Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His 450 455 460
- Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val 465 470 475 480
- Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg 485 490 495
- Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 500 505 510
- Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 515 520 525
- Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 530 540
- Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 545 550 555 560
- Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 570 575
- Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 580 585 590
- Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
  595 600 605
- Leu Arg Ser Leu Gln Asp Thr Glu Glu Lys Ser Arg Ser Phe Ser Ala 610 615 620
- Ser Gln Ala Asp Pro Leu Ser Asp Pro Asp Gln Met Asn Glu Asp Lys 625 630 635 640

Arg His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp 645 650 655

Ser Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg 660 665 670

Asn Arg Asn Asn Ile Ala 675

<210> 274

<211> 678

<212> PRT

<213> Homo sapiens

<400> 274

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10

Tyr Ser Arg Ser Leu Asp Lys Arg Arg Ser Leu Gln Asp Thr Glu Glu 20 25 30

Lys Ser Arg Ser Phe Ser Ala Ser Gln Ala Asp Pro Leu Ser Asp Pro 35 40 45

Asp Gln Met Asn Glu Asp Lys Arg His Ser Gln Gly Thr Phe Thr Ser 50 55 60

Asp Tyr Ser Lys Tyr Leu Asp Ser Arg Arg Ala Gln Asp Phe Val Gln 65 70 75 80

Trp Leu Met Asn Thr Lys Arg Asn Arg Asn Asn Ile Ala Asp Ala His
85 90 95

Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe 100 105 110

Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro 115 120 125

Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys 130 135 140

Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His 145 150 155 160

Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr 165 170 175

Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn 180 185 190

Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu 195 200 205

Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu

210 215 220 Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro 230 235 Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala 245 250 Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu 265 Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys 280 Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp 345 Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro 425 Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr 440 Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu 465 475 Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe 485 490 Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser

515 520 525

Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp 530 535 540

Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr 545 550 555 560

Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn 565 570 575

Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro 580 585 590

Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr 595 600 605

Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu 610 615 620

Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val 625 630 635 640

Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp 645 650 655

Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser 660 665 670

Gln Ala Ala Leu Gly Leu 675

<210> 275

<211> 646

<212> PRT

<213> Homo sapiens

<400> 275

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 15

Tyr Ser Arg Ser Leu Asp Lys Arg Asp Ala His Lys Ser Glu Val Ala
20 25 30

His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu 35 40

Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
50 55 60

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp 65 70 75 80

Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp 85 90 95 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala 100 105 105 110

- Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln 115 120 125
- His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
- Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys 145 - 155 - 160
- Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro 165 170 175
- Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys 180 185 190
- Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu 195 200 205
- Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys 210 220
- Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val 225 - 230 - 230 - 235 - 240
- Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly 265 270
- Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile 275
- Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu 290 295 300
- Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp 310 315 320
- Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser 325 330 335
- Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly 340 345 350
- Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val 355
- Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys 370 375 380
- Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu 390 395 400

Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys 405 410 415

Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu 420 425 430

Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val 435 440 445

Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His 450 455 460

Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val 465 470 475 480

Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg 485 490 495

Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 500 505 510

Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 515 520 525

Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 530 535 540

Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 545 550 560

Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 570 575

Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 580 585 590

Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly 595 600 605

Leu His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp 610 615 620

Ser Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg 625 630 635 640

Asn Arg Asn Asn Ile Ala 645

<210> 276

<211> 646

<212> PRT

<213> Homo sapiens

<400> 276

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10 15

Tyr Ser Arg Ser Leu Asp Lys Arg His Ser Gln Gly Thr Phe Thr Ser 20 25 30

Asp Tyr Ser Lys Tyr Leu Asp Ser Arg Arg Ala Gln Asp Phe Val Gln 35 40

Trp Leu Met Asn Thr Lys Arg Asn Arg Asn Asn Ile Ala Asp Ala His 50 55 60

Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe
65 75 80

Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro 85 90 95

Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys
100 105 110

Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His 115 120 125

Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr 130 135 140

Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn 145 150 155 160

Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu 165 170 175

Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu 180 185 190

Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro 195 200 205

Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala 210 215 220

Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu 225 230 235 240

Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys 245 250 255

Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe 260 265 270

Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu 275 280 285

Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr 290 295 300 Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp 305 310 315 320

Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu 325 330 335

Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala 340 345 350

Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala 355 360 365

Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys 370 375 380

Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro 385 390 395 400

Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr 405 410 415

Thr Leu Glu Lys Cys Cys Ala Ala Asp Pro His Glu Cys Tyr Ala 420 425 430

Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu 435 440 445

Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe 450 455 460

Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser 465 470 475 480

Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser 485 490 495

Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp 500 505 510

Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr 515 520 525

Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn 530 535 540

Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro 545 550 555 560

Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr 565 570 575

Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu 580 585 590

Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val 595 600 605 Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp 610 615 620

Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser 625 630 635 640

Gln Ala Ala Leu Gly Leu 645

<210> 277

<211> 636

<212> PRT

<213> Homo sapiens

<400> 277

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10 15

Tyr Ser Arg Ser Leu Asp Lys Arg Asp Ala His Lys Ser Glu Val Ala 20 25 30

His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu 35 40 45

Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val 50 55 60

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp 65 70 75 80

Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp 85 90 95

Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala 100 105 110

Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln 115 120 125

His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val 130 135 140

Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys 145 150 150 160

Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro 165 170 175

Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys 180 185 190

Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu 195 200 205

Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys

	210					215					220				
Ala 225	Ser	Leu	Gln	Lys	Phe 230	Gly	Glu	Arg	Ala	Phe 235	Lys	Ala	Trp	Ala	Val 240
Ala	Arg	Leu	Ser	Gln 245	Arg	Phe	Pro	Lys	Ala 250	Glu	Phe	Ala	Glu	Val 255	Ser
Lys	Leu	Val	Thr 260	Asp	Leu	Thr	Lys	Val 265	His	Thr	Glu	Cys	Cys 270	His	Gly
Asp	Leu	Leu 275	Glu	Cys	Ala	Asp	Asp 280	Arg	Ala	Asp	Leu	Ala 285	Lys	Tyr	Ile
Cys	Glu 290	Asn	Gln	Asp	Ser	11e 295	Ser	Ser	Lys	Leu	Lys 300	Glu	Суѕ	Суѕ	Glu
Lys 305	Pro	Leu	Leu	Glu	Lys 310	Ser	His	Суѕ	Ile	Ala 315	Glu	Val	Glu	Asn	Asp 320
Glu	Met.	Pro	Ala	Asp 325	Leu	Pro	Ser	Leu	Ala 330	Ala	Asp	Phe	Val	Glu 335	Ser
Lys	Asp	Val	Cys 340	Lys	Asn	Tyr	Ala	Glu 345	Ala	Lys	Asp	Val	Phe 350	Leu	Gly
Met	Phe	Leu 355	Tyr	Glu	Tyr	Ala	Arg 360	Arg	His	Pro	Asp	Tyr 365	Ser	Val	Val
Leu	Leu 370	Leu	Arg	Leu	Ala	Lys 375	Thr	Tyr	Glu	Thr	Thr 380	Leu	Glu	Lys	Cys
Сув 385	Ala	Ala	Ala	Asp	Pro 390	His	Glu	Cys	Tyr	Ala 395	Lys	Val	Phe	Asp	Glu 400
Phe	Lys	Pro	Leu	Val 405	Glu	Glu	Pro	Gln	Asn 410	Leu	Ile	Lys	Gln	Asn 415	Cys
Glu	Leu	Phe		Gln	Leu	Gly	Glu	Tyr 425	Lys	Phe	Gln	Asn	Ala 430	Leu	Leu
Val	Arg	Tyr 435	Thr	Lys	Lys	Val	Pro 440	Gln	Val	Ser	Thr	Pro 445	Thr	Leu	Val
Glu	Val 450	Ser	Arg	Asn	Leu	Gly 455	Lys	Val	Gly	Ser	Lys 460	Cys	Cys	Lys	His
Pro 465	Glu	Ala	Lys	Arg	Met 470	Pro	Сув	Ala	Glu	Asp 475	Tyr	Leu	Ser	Val	Val 480
Leu	Asn	Gln	Leu	Cys 485	Val	Leu	His	Glu	Lys 490	Thr	Pro	Val	Ser	Asp 495	
Val	Thr	Lys	Cys 500	Cys	Thr	Glu	Ser	Leu 505	Val	Asn	Arg	Arg	Pro 510	Cys	Phe
Ser	Ala	Leu	Glu	Val	Asp	Glu	Thr	Tvr	Va]	Pro	Lvs	Glu	Phe	Asn	Ala

520 525 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 535 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 550 555 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 585 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly 600 Leu His Ala Asp Gly Val Phe Thr Ser Asp Phe Ser Lys Leu Leu Gly 615 620 Gln Leu Ser Ala Lys Lys Tyr Leu Glu Ser Leu Met 630 <210> 278 <211> 636 <212> PRT <213> Homo sapiens <400> 278 Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala Tyr Ser Arg Ser Leu Asp Lys Arg His Ala Asp Gly Val Phe Thr Ser Asp Phe Ser Lys Leu Leu Gly Gln Leu Ser Ala Lys Lys Tyr Leu Glu Ser Leu Met Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn 100 105 Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val

Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys

Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asn 150 Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr 165 170 Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu 185 Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys 295 Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp 310 Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu 330 Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp 345 Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys 360 Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu 375 Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp 405 Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln

Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys 450 455 460

Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn 465 470 475 480

Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg 485 490 495

Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys 500 505 510

Val Leu His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys 515 520 525

Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val 530 535 540

Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe 545 550 555 560

His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys 565 570 575

Gln Thr Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys 580 585 590

Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys 595 600 605

Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys 610 615 620

Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu 625 635

<210> 279

<211> 634

<212> PRT

<213> Homo sapiens

<400> 279

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10

Tyr Ser Arg Ser Leu Asp Lys Arg Asp Ala His Lys Ser Glu Val Ala 20 25 30

His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
35 40 45

Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
50 60

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp 85 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala 100 105 Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln 120 His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val 135 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys 150 155 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro 170 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys . Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser 245 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile 280 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp 310 315 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly 345 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val

Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys 370 375 380

Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu 385 390 ( 395 400

Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys 405 410 415

Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu 420 425 430

Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val 435 440 445

Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His 450 455 460

Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val 465 470 475 480

Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg 485 490 495

Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 500 505 510

Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 515 520 525

Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 530 535 540

Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 545 550 555 560

Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 570 575

Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 580 585 590

Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly 595 600 605

Leu Asn Leu His Phe Cys Gln Leu Arg Cys Lys Ser Leu Gly Leu Leu 610 615 620

Gly Lys Cys Ala Gly Ser Cys Ala Cys Val 625 630

<210> 280

<211> 634

<212> PRT

<213> Homo sapiens

<400> 280

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10 15

Tyr Ser Arg Ser Leu Asp Lys Arg Asn Leu His Phe Cys Gln Leu Arg
20 25 30

Cys Lys Ser Leu Gly Leu Leu Gly Lys Cys Ala Gly Ser Cys Ala Cys 35 40

Val Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly 50 60

Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu 65 70 75 80

Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr 85 90 95

Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp 100 105 110

Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr 115 120 125

Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu 130 135 140

Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn 145 150 155 160

Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe 165 170 175

His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala 180 185 190

Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys 195 200 205

Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala 210 215 220

Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala 225 230 235 240

Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly 245 250 255

Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe 260 265 270

Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr 275 280 280

Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp

	290					295					300				
Asp 305	Arg	Ala	Asp	Leu	Ala 310	Lys	Tyr	Ile	Cys	Glu 315	Asn	Gln	Asp	Ser	Ile 320
Ser	Ser	Lys	Leu	Lys 325	G1u	Суз	Cys	Glu	Lys 330	Pro	Leu	Leu	Glu	Lys 335	Ser
His	Суѕ	Ile	Ala 340	Glu	Val	Glu	Asn	Asp 345	Glu	Met	Pro	Ala	Asp 350	Leu	Pro
Ser	Leu	Ala 355	Ala	Asp	Phe	Val	G1u 360	Ser	Lys	Asp	Val	Cys 365	Lys	Asn	Tyr
Ala	Glu 370	Ala	Lys	Asp	Val	Phe 375	Leu	Gly	Met	Phe	Leu 380	Tyr	Glu	Tyr	Ala
Arg 385	Arg	His	Pro	Asp	Тут 390	Ser	Val	Val	Leu	Leu 395	Leu	Arg	Leu	Ala	Lys 400
Thr	Tyr	Glu	Thr	Thr 405	Leu	Glu	Lys	Cys	Cys 410	Ala	Ala	Ala	Asp	Pro 415	His
Glu	Cys	Tyr	Ala 420	Lys	Val	Phe	Asp	Glu 425		Lys	Pro	Leu	Val 430	Glu	Glu
Pro	Gln	Asn 435	Leu	Ile	Lys	Gln	Asn 440	Cys	Glu	Leu	Phe	Glu 445	Gln	Leu	Gly
Glu	Tyr 450	Lys	Phe	Gln	Asn	Ala 455	Leu	Leu	Va1	Arg	Tyr 460	Thr	Lys	Lys	Val
Pro 465	Gln	Val	Ser	Thr	Pro 470	Thr	Leu	Val	Glu	Val 475	Ser	Arg	Asn	Leu	Gly 480
Lys	Val	Gly	Ser	Lys 485	Cys	Cys	Lys	His	Pro 490	Glu	Ala	Lys	Arg	Met 495	
Cys	Ala	Glu	Asp 500	Tyr	Leu	Ser	Val	Val 505	Leu	Asn	Gln	Leu	Cys 510	Val	Leu
His	Glu	Lys 515	Thr	Pro	Val	Ser	Asp 520	Arg	Val	Thr	Lys	Cys 525	Cys	Thr	Glu
Ser	Leu 530	Val	Asn	Arg	Arg	Pro 535	Cys	Phe	Ser	Ala	Leu 540	Glu	Val	Asp	Glu
Thr 545	Tyr	Val	Pro	Lys	Glu 550	Phe	Asn	Ala	Glu	Thr 555	Phe	Thr	Phe	His	Ala 560
Asp	Ile	Cys	Thr	Leu 565	Ser	Glu	Lys	Glu	Arg 570	Gln	Ile	Lys	Lys	Gln 575	Thr
Ala	Leu	Val	Glu 580	Leu	Val	Lys	His	Lys 585	Pro	Lys	Ala	Thr	Lys 590	Glu	Gln
Leu	Lvs	Ala	Va1	Met	Asp	asa	Phe	Ala	Ala	Phe	Val	Glu	Lve	Cve	Cve

595 600

Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu 610 615 620

Val Ala Ala Ser Gln Ala Ala Leu Gly Leu 625 630

<210> 281

<211> 661

<212> PRT

<213> Homo sapiens

<400> 281

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10 15

Tyr Ser Arg Ser Leu Asp Lys Arg Ser Pro Lys Met Val Gln Gly Ser 20 25 30

Gly Cys Phe Gly Arg Lys Met Asp Arg Ile Ser Ser Ser Gly Leu 35 40 45

Gly Cys Ser Pro Lys Met Val Gln Gly Ser Gly Cys Phe Gly Arg Lys 50 60

Met Asp Arg Ile Ser Ser Ser Gly Leu Gly Cys Asp Ala His Lys 65 70 75 80

Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys 85 90 95

Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe 100 105 110

Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr 115 120 125

Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr 130 135 140

Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr 145 150 155 160

Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu 165 170 175

Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val

Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu 195 200 205

Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr 210 220

 Phe Tyr Ala Pro Glu
 Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala

 225
 230

 Phe Thr Glu Cys Cys Gln
 Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro

 240

Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln 260 265 270

Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys 275 280 285

Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe 290 295 300

Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu 305 310 315 320

Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu 325 330 335

Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys 340 345 350

Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu 355 360 365

Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp 370 375 380

Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp 385 390 395 400

Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp 405 410 415

Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr 420 425 430

Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys 435 440 445

Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile 450 455 460

Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln 465 470 475 480

Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr 485 490 495

Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys 500 505 510

Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr 515 520 525 Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro 530 535 540

Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg 545 550 555 560

Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys 565 570 575

Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu 580 585 590

Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu 595 600 605

Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met 610 615 620

Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys 625 630 635 640

Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln 645 650

Ala Ala Leu Gly Leu 660

<210> 282

<211> 665

<212> PRT

<213> Homo sapiens

<400> 282

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 1 5 10

Tyr Ser Arg Ser Leu Asp Lys Arg Ser Pro Lys Met Val Gln Gly Ser 20 25 30

Gly Cys Phe Gly Arg Lys Met Asp Arg Ile Ser Ser Ser Gly Leu 35 40

Gly Cys Lys Val Ser Pro Lys Met Val Gln Gly Ser Gly Cys Phe Gly 50 55

Arg Lys Met Asp Arg Ile Ser Ser Ser Ser Gly Leu Gly Cys Lys Val 65 70 75 80

Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu 85 90 95

Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln
100 105 110

Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu 115 120 125

- Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys 130 135 140
- Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu 145 150 155 160
- Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro 165 170 175
- Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu 180 185 190
- Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His 195 200 205
- Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg 210 215 220
- Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg 225 230 235 240
- Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala 245 250 255
- Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser 260 265 270
- Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu 275 280 285
- Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro 290 295 300
- Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys 305 310 315 320
- Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp 325 330 335
- Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser 340 345 350
- Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His 355 360 365
- Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser 370 375 380
- Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala 385 390 395 400
- Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg 405 410 415

Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr 420 425 430

Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu 435 440 445

Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro 450 455 460

Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu 465 470 475 480

Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro 485 490 495

Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys 500 505 510

Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys 515 520 525

Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His 530 540

Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser 545 550 555 5560

Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr 565 570 575

Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp 580 585 590

Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala 595 600 605

Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu 610 620

Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys 625 630 635 640

Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val 645 650 655

Ala Ala Ser Gln Ala Ala Leu Gly Leu 660 665

<210> 283

<211> 670

<212> PRT

<213> Homo sapiens

<400> 283

Met Trp Trp Arg Leu Trp Trp Leu Leu Leu Leu Leu Leu Leu Trp

	1	•			5	5		•		10	)				15	5
	Pro	Met	: Va]	l Trp 20	Ala	s Sei	Pro	D Lys	Met 25		Glr	Gly	Ser	Gly 30		Phe
	Gly	Arg	J Lys 35	Met	: Asp	Arg	, Ile	Ser 40		Ser	Ser	Gly	Leu 45	-	Cys	. Lys
	Val	Leu 50	Arg	J Arg	His	Ser	Pro 55	Lys	Met	: Val	Gln	Gly 60		Gly	Cys	Phe
	G1y 65	Arg	Lys	Met	Asp	Arg 70	Ile	e Ser	Ser	Ser	Ser 75		Leu	Gly	Cys	Lys 80
	Val	Leu	Arg	Arg	His 85		Ala	His	Lys	Ser 90		Val	Ala	His	Arg 95	Phe
	Lys	Asp	Leu	100	Glu	Glu	Asn	Phe	Lys 105		Leu	Val	Leu	Ile 110		Phe
	Ala	Gln	Tyr 115	Leu	Gln	Gln	Суз	Pro 120		Glu	Asp	His	Val 125		Leu	Val
	Asn	Glu 130	Val	Thr	Glu	Phe	Ala 135		Thr	Cys	Val	Ala 140	Asp	Glu	Ser	Ala
	Glu 145	Asn	Cys	Asp	Lys	Ser 150	Leu	His	Thr	Leu	Phe 155	Gly	Asp	Lys	Leu	Cys 160
	Thr	Val	Ala	Thr	Leu 165	Arg	Glu	Thr	Tyr	Gly 170	Glu	Met	Ala	Asp	Cys 175	Cys
	Ala	Lys	Gln	Glu 180	Pro	Glu	Arg	Asn	Glu 185	Cys	Phe	Leu	Gln	His 190	Lys	Asp
	Asp	Asn	Pro 195	Asn	Leu	Pro	Arg	Leu 200	Val	Arg	Pro	Glu	Val 205	Asp	Val	Met
	Cys	Thr 210	Ala	Phe	His	Asp	Asn 215	Glu	Glu	Thr	Phe	Leu 220	Lys	Lys	Tyr	Leu
	Tyr 225	Glu	Ile	Ala	Arg	Arg 230	His	Pro	Туг	Phe	Tyr 235	Ala	Pro	Glu	Leu	Leu 240
	Phe	Phe	Ala	Lys	Arg 245	Tyr	Lys	Ala	Ala	Phe 250	Thr	Glu	Cys	Cys	Gln 255	Ala
2	Ala	Asp	Lys	Ala 260	Ala	Cys	Leu	Leu	Pro 265	Lys	Leu	Asp	Glu	Leu 270	Arg	Asp
•	31u	Gly	Lys 275	Ala	Ser	Ser	Ala	Lys 280	Gln	Arg	Leu	Lys	Cys 285	Ala	Ser	Leu
•	Sln	Lys 290	Phe	Gly	Glu	Arg	Ala 295	Phe	Lys	Ala	Trp	Ala 300	Val	Ala	Arg	Leu
5	Ser	Gln	Arg	Phe	Pro	Lys	Ala	Glu	Phe	Ala	Glu	Val	Ser	Lys	Leu	Val

305	,				310	)				315	5				320
Thr	Asp	Leu	Thr	1 Lys 325	Val	His	Thr	Glu	330	Cys	His	Glý	Ası	335	
Glu	Суз	Ala	Asp 340	Asp	Arg	Ala	Asp	Leu 345	Ala	Lys	туг	Ile	Cys 350		Asn
Gln	Asp	Ser 355	Ile	e Ser	Ser	Lys	Leu 360	Lys	Glu	Cys	Cys	Glu 365		Pro	Leu
Leu	Glu 370	Lys	Ser	His	Cys	Ile 375	Ala	Glu	Val	Glu	Asn 380		Glu	Met	Pro
Ala 385	Asp	Leu	Pro	Ser	Leu 390	Ala	Ala	Asp	Phe	Val 395		Ser	Lys	Asp	Val 400
Cys	Lys	Asn	Tyr	Ala 405	Glu	Ala	Lys	Asp	Val 410		Leu	Gly	Met	Phe 415	
Tyr	Glu	Tyr	Ala 420	Arg	Arg	His	Pro	Asp 425		Ser	Val	Val	Leu 430		Leu
Arg	Leu	Ala 435	Lys	Thr	Tyr	Glu	Thr 440	Thr	Leu	Glu	Lys	Cys 445	Суѕ	Ala	Ala
Ala	Asp 450	Pro	His	Glu	Суз	Tyr 455	Ala	Lys	Val	Phe	Asp 460	Glu	Phe	Lys	Pro
Leu 465	Val	Glu.	Glu	Pro	Gln 470	Asn	Leu	Ile	Lys	Gln 475	Asn	Сув	Glu	Leu	Phe 480
Glu	Gln	Leu	Gly	Glu 485	Tyr	Lys	Phe	Gln	Asn 490	Ala	Leu	Leu	Val	Arg 495	Tyr
Thr	Lys	Lys	Val 500	Pro	Gln	Val	Ser	Thr 505	Pro	Thr	Leu	Val	Glu 510	Val	Ser
Arg	Asn	Leu 515	Gly	Lys	Val	Gly	Ser 520	Lys	Cys	Суѕ	Lys	His 525	Pro	Glu	Ala
Lys	Arg 530	Met	Pro	Cys	Ala	Glu 535	Asp	Tyr	Leu	Ser	Val 540	Val	Leu	Asn	Gln
Leu 545	Cys	Val	Leu	His	Glu 550	Lys	Thr	Pro	Val	Ser 555	Asp	Arg	Val	Thr	Lys 560
уs	Суз	Thr	Glu	Ser 565	Leu	Val	Asn	Arg	Arg 570	Pro	Çys	Phe	Ser	Ala 575	Leu
lu	Val	Asp	Glu 580	Thr	Тут	Val	Pro	Lys 585	Glu	Phe	Asn	Ala	Glu 590	Thr	Phe
hr	Phe	His 595	Ala	Asp	Ile	Cys	Thr 600	Leu	Ser	Glu		Glu 605	Arg	Gln	Ile
ys	Lys	Gln	Thr	Ala	Leu	Val	Glu	Leu	Val	Lys	His	Lys	Pro	Lys	Ala

615 620 610 Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val 630 635 Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu 645 650 Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu 665 <210> 284 <211> 663 <212> PRT <213> Homo sapiens <400> 284 Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala 10 Tyr Ser Arg Ser Leu Asp Lys Arg Ser Pro Lys Met Val Gln Gly Ser Gly Cys Phe Gly Arg Lys Met Asp Arg Ile Ser Ser Ser Ser Gly Leu 40 Gly Cys Lys Ser Pro Lys Met Val Gln Gly Ser Gly Cys Phe Gly Arg Lys Met Asp Arg Ile Ser Ser Ser Gly Leu Gly Cys Lys Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys 105 Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu 150 155 Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg 165

Asn Glu Cys Phe Leu Gln His Lys Asp Asn Pro Asn Leu Pro Arg 180 185 190

Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn 195 200 205

Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys 230 235 Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala 265 Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala 280 Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala 295 Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala 325 330 Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys 345 Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile 360 Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala 375 Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala 385 390 395 Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr 440 Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val 490 Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly 505

Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu 515 520 525

Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys 530 535 540

Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val 545 550 555 560

Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val 565 570 575

Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys 580 585 590

Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val 595 600 605

Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala 610 615 620

Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp 625 630 635 635

Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala 645 650 655

Ser Gln Ala Ala Leu Gly Leu 660

<210> 285

<211> 68

<212> PRT

<213> Homo sapiens

<400> 285

Ser Arg Gly Pro Tyr His Pro Ser Glu Cys Cys Phe Thr Tyr Thr Thr 1 5 10 15

Tyr Lys Ile Pro Arg Gln Arg Ile Met Asp Tyr Tyr Glu Thr Asn Ser 20 25 30

Gin Cys Ser Lys Pro Gly Ile Val Phe Ile Thr Lys Arg Gly His Ser

Val Cys Thr Asn Pro Ser Asp Lys Trp Val Gln Asp Tyr Ile Lys Asp 50 55 60

Met Lys Glu Asn

<210> 286

<211> 68

<212> PRT

<213> Homo sapiens

<400> 286

Ser Arg Gly Pro Tyr His Pro Ser Glu Cys Cys Phe Thr Tyr Thr Thr 1 5 10 15

Tyr Lys Ile Pro Arg Gln Arg Ile Met Asp Tyr Tyr Glu Thr Asn Ser 20 25 30

:Gln Cys Ser Lys Pro Gly Ile Val Phe Ile Thr Lys Arg Gly His Ser 35 40 45

Val Cys Thr Asn Pro Ser Asp Lys Trp Val Gln Asp Tyr Ile Lys Asp 50 55

Met Lys Glu Asn

<210> 287

<211> 66

<212> PRT

<213> Homo sapiens

<400> 287

Gly Pro Tyr His Pro Ser Glu Cys Cys Phe Thr Tyr Thr Thr Tyr Lys

1 10 15

Ile Pro Arg Gln Arg Ile Met Asp Tyr Tyr Glu Thr Asn Ser Gln Cys
20 25 30

Ser Lys Pro Gly Ile Val Phe Ile Thr Lys Arg Gly His Ser Val Cys 35 40 45

Thr Asn Pro Ser Asp Lys Trp Val Gln Asp Tyr Ile Lys Asp Met Lys 50 55 60

Glu Asn 65

<210> 288

<211> 32

<212> PRT

<213> Homo sapiens

<400> 288

Ser Pro Lys Met Val Gln Gly Ser Gly Cys Phe Gly Arg Lys Met Asp 1 10 15

Arg Ile Ser Ser Ser Gly Leu Gly Cys Lys Val Leu Arg Arg His 20 25 30

<210> 289

<211> 241

<212> PRT

<213> Homo sapiens

<400> 289

Ala Thr Met Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro 1 5 10

Ile Leu Val Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val 20 25 30

Ser Gly Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys 35 40 45

Phe Ile Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val 50 55 60

Thr Thr Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His 65 70 75 80

Met Lys Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val 85 90 95

Gln Glu Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg 100 105 110

Ala Glu Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu
115 120 125

Lys Gly Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu 130 135 140

Glu Tyr Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln 145 150 155 160

Lys Asn Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp 165 170 175

Gly Ser Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly 180 185 190

Asp Gly Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser 195 200 205

Ala Leu Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu 210 215 220

Glu Phe Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr 225 230 235 240

Lys

<210> 290

<211> 165

<212> PRT

<213> Homo sapiens

<400> 290

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met
1 5 10 15

Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp 20 25 30

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln
35 40 45

Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe 50 55 60

Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu 65 70 75 80

Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu 85 90 95

Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys
100 105 110

Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu 115 120 125

Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg 130 135 140

Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser 145 5 150 160

Leu Arg Ser Lys Glu

<210> 291

<211> 165

<212> PRT

<213> Homo sapiens

<400> 291

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met

1 10 15

Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp 20 25 30

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln 35

Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe 50 60

Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu 65 70 75 80

Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
85 90 95

Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys
100 105 110

Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu 115 120 125

Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg 130 135 140

Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser 145 150 155 160

Leu Arg Ser Lys Glu 165

<210> 292

<211> 165

<212> PRT

<213> Homo sapiens

<400> 292

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met
1 5 10 15

Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp 20 25 30

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln 35 40

Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe 50 55 60

Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
65 70 75 80

Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu 85 90 95

Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys 100 105 110

Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu 115 120 125

Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg 130 135 140

Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser 145 150 155 160

Leu Arg Ser Lys Glu 165

<210> 293

<211> 30

<212> PRT

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<213> Homo sapiens
<400> 293
His Gly Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg
                                 25
<210> 294
<211> 14
<212> PRT
<213> Homo sapiens
<400> 294
Ala Gly Cys Lys Asn Phe Phe Trp Lys Thr Phe Thr Ser Cys
<210> 295
<211> 30
<212> PRT
<213> Homo sapiens
<400> 295
His Gly Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg
<210> 296
<211> 30
<212> PRT
<213> Homo sapiens
<400> 296
His Gly Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg
             20
                                 25
<210> 297
<211> 30
<212> PRT
<213> Homo sapiens
<400> 297
His Gly Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
                                     10
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg
            20
                                 25
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<210> 298
<211> 32
<212> PRT
<213> Homo sapiens
<400> 298
Ser Pro Lys Met Val Gln Gly Ser Gly Cys Phe Gly Arg Lys Met Asp
Arg Ile Ser Ser Ser Gly Leu Gly Cys Lys Val Leu Arg Arg His
           20
<210> 299
<211> 30
<212> PRT
<213> Homo sapiens
<400> 299
His Gly Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg
<210> 300
<211> 30
<212> PRT
<213> Homo sapiens '
<400> 300
His Gly Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg
             20
<210> 301
<211> 30
<212> PRT
<213> Homo sapiens
<400> 301
His Gly Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg
             20
<210> 302
<211> 30
<212> PRT
<213> Homo sapiens
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<400> 302

His Gly Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly

1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg 20 25 30

<210> 303

<211> 657

<212> PRT

<213> Homo sapiens

<400> 303

Met Asn Ile Phe Tyr Ile Phe Leu Phe Leu Leu Ser Phe Val Gln Gly
1 5 10 15

Leu Glu His Thr His Arg Arg Gly Ser Leu Asp Lys Arg His Gly Glu 20 25 30

Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly Gln Ala Ala 35 40 45

Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg Asp Ala His Lys Ser 50 60

Glu Val Ala His Arg Phe Lys Asp Asp Ala His Lys Ser Glu Val Ala 65 70 75 80

His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu 85 90 95

Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val 100 105 110

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp 115 120 125

Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp 130 135 140

Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala 145 150 155 160

Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
165 170 175

His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val

Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys 195 200 205

Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro 210 215 220

Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys

225					230					235					240
Суs	Gln	Ala	Ala	Asp 245	Lys	Ala	Ala	Cys	Leu 250	Leu	Pro	Lys	Leu	Asp 255	Glu
Leu	Arg	Asp	Glu 260	Gly	Lys	Ala	Ser	Ser 265	Ala	Lys	Gln	Arg	Leu 270	Lys	Cys
Ala	Ser	Leu 275	Gln	Lys	Phe	Gly	Glu 280	Arg	Ala	Phe	Lys	Ala 285	Trp	Ala	Val
Ala	Arg 290	Leu	Ser	Gln	Arg	Phe 295	Pro	Lys	Ala	Glu	Phe 300	Ala	Glu	Val	Ser
<b>Lys</b> 305	Leu	Val	Thr	Asp	Leu 310	Thr	Lys	Val	His	Thr 315	Glu	Cys	Cys	His	Gly 320
Asp	Leu	Leu	Glu	Cys 325	Ala	Asp	Asp	Arg	Ala 330	Asp	Leu	Ala	Lys	Tyr 335	Ile
Cys	Glu	Asn	Gln 340	Asp	Ser	Ile	Ser	Ser 345	Lys	Leu	Lys	Glu	Суs 350	Cys	Glu
Lys	Pro	Leu 355	Leu	Glu	Lys	Ser	His 360	Суѕ	Ile	Ala	Glu	Va1 365	G1u	Asn	Asp
Glu	Met 370	Pro	Ala	Asp	Leu	Pro 375	Ser	Leu	Ala	Ala	Asp 380	Phe	Val	Glu	Ser
Lys 385	Asp	Val	Суз	Lys	Asn 390	Tyr	Ala	Glu	Ala	Lys 395	Asp	Val	Phe	Leu	Gly 400
Met	Phe	Leu	Tyr	Glu 405	Tyr	Ala	Arg	Arg	His 410	Pro	Asp	Tyr	Ser	Val 415	Val
Leu	Leu	Leu	Arg 420	Leu	Ala	Lys	Thr	Tyr 425	Glu	Thr	Thr	Leu	Glu 430	Lys	Cys
Cys	Ala	Ala 435	Ala	Asp	Pro	His	Glu 440	Суѕ	Tyr	Ala	Lys	Val 445	Phe	Asp	Glu
Phe	Lys 450	Pro	Leu	Val	Glu	Glu 455	Pro	Gln	Asn	Leu	11e 460	Lys	Gln	Asn	Cys
Glu 465	Leu	Phe	Glu	Gln	Leu 470	Gly	Glu	Tyr	Lys	Phe 475	Gln	Asn	Ala	Leu	Leu 480
Val	Arg	Tyr	Thr	Lys 485	Lys	Val	Pro	Gln	Val 490	Ser	Thr	Pro	Thr	Leu 495	Val
Glu	Val	Ser	Arg 500	Asn	Leu	Gly	Lys	Val 505	Gly	Ser	Lys	Cys	Cys 510	Lys	His
Pro	Glu	Ala 515	Lys	Arg	Met	Pro	Cys 520	Ala	Glu	Asp	Tyr	Leu 525	Ser	Val	Val
Leu	Asn	Gln	Leu	Суѕ	Val	Leu	His	Glu	Lys	Thr	Pro	Val	Ser	Asp	Arg

530 535 540

Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 545 550 560

Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 565 570 575

Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 580 585 590

Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 595 600 605

Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 610 620

Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 625 630 635

Ala Glu Glu Gly Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
645 650 655

Leu

<210> 304

<211> 32

<212> PRT

<213> Homo sapiens

<400> 304

Ser Pro Lys Met Val Gln Gly Ser Gly Cys Phe Gly Arg Lys Met Asp 1  $\phantom{\bigg|}$  10  $\phantom{\bigg|}$  15

Arg Ile Ser Ser Ser Gly Leu Gly Cys Lys Val Leu Arg Arg His 20 25 30

<210> 305

<211> 30

<212> PRT

<213> Homo sapiens

<400> 305

His Gly Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg 20 25 30

<210> 306

<211> 30

<212> PRT

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<213> Homo sapiens
<400> 306
His Gly Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg
<210> 307
<211> 30
<212> PRT
<213> Homo sapiens
<400> 307
His Gly Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg
                                 25
<210> 308
<211> 30
<212> PRT
<213> Homo sapiens
<400> 308
His Gly Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg
<210> 309
<211> 28
<212> PRT
<213> Homo sapiens
<400> 309
Ser Leu Arg Arg Ser Ser Cys Phe Gly Gly Arg Met Asp Arg Ile Gly
Ala Gln Ser Gly Leu Gly Cys Asn Ser Phe Arg Tyr
<210> 310
<211> 30
<212> PRT
<213> Homo sapiens
<400> 310
His Gly Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
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20
                                25
<210> 311
<211> 30
<212> PRT
<213> Homo sapiens
<400> 311
His Gly Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg
            20
<210> 312
<211> 30
<212> PRT
<213> Homo sapiens
<400> 312
His Gly Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg
<210> 313
<211> 34
<212> PRT
<213> Homo sapiens
<400> 313
Ile Lys Pro Glu Ala Pro Gly Glu Asp Ala Ser Pro Glu Glu Leu Asn
Arg Tyr Tyr Ala Ser Leu Arg His Tyr Leu Asn Leu Val Thr Arg Gln
             20
                                 25
Arg Tyr
<210> 314
<211> 29
<212> PRT
<213> Homo sapiens
<400> 314
Ser Pro Lys Met Val Gln Gly Ser Gly Cys Phe Gly Arg Lys Met Asp
Arg Ile Ser Ser Ser Gly Leu Gly Cys Lys Val Leu
             20
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Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg

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<210> 315
<211> 29
<212> PRT
<213> Homo sapiens
<400> 315
Ser Pro Lys Met Val Gln Gly Ser Gly Cys Phe Gly Arg Lys Met Asp
                                     10
Arg Ile Ser Ser Ser Gly Leu Gly Cys Lys Val Leu
             20
<210> 316
<211> 34
<212> PRT
<213> Homo sapiens
<400> 316
Ile Lys Pro Glu Ala Pro Gly Glu Asp Ala Ser Pro Glu Glu Leu Asn
Arg Tyr Tyr Ala Ser Leu Arg His Tyr Leu Asn Leu Val Thr Arg Gln
             20
                                 25
Arg Tyr
<210> 317
<211> 32
<212> PRT
<213> Homo sapiens
<400> 317
Ser Pro Lys Met Val Gln Gly Ser Gly Cys Phe Gly Arg Lys Met Asp
Arg Ile Ser Ser Ser Ser Gly Leu Gly Cys Lys Val Leu Arg Arg His
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<400> 318 Ser Pro Lys Met Val Gln Gly Ser Gly Cys Phe Gly Arg Lys Met Asp

<210> 318 <211> 32 <212> PRT

<213> Homo sapiens

10 Arg Ile Ser Ser Ser Gly Leu Gly Cys Lys Val Leu Arg Arg His 30 25 20 <210> 319 <211> 33 <212> PRT <213> Homo sapiens <400> 319 His Ala Asp Gly Ser Phe Ser Asp Glu Met Asn Thr Ile Leu Asp Asn 10 Leu Ala Ala Arg Asp Phe Ile Asn Trp Leu Ile Gln Thr Lys Ile Thr 25 Asp <210> 320 <211> 33 <212> PRT <213> Homo sapiens <400> 320 His Ala Asp Gly Ser Phe Ser Asp Glu Met Asn Thr Ile Leu Asp Asn Leu Ala Ala Arg Asp Phe Ile Asn Trp Leu Ile Gln Thr Lys Ile Thr 25 Asp <210> 321 <211> 26 <212> PRT <213> Homo sapiens <400> 321 Ser Pro Lys Met Val Gln Gly Ser Gly Cys Phe Gly Arg Lys Met Asp Arg Ile Ser Ser Ser Ser Gly Leu Gly Cys

20

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<210> 322
 <211> 27
 <212> PRT
 <213> Homo sapiens
 <400> 322
 Ser Pro Lys Met Val Gln Gly Ser Gly Cys Phe Gly Arg Lys Met Asp
                                      10
Arg Ile Ser Ser Ser Ser Gly Leu Gly Cys Lys
             20
 <210> 323
<211> 28
 <212> PRT
<213> Homo sapiens
<400> 323
Ser Pro Lys Met Val Gln Gly Ser Gly Cys Phe Gly Arg Lys Met Asp
Arg Ile Ser Ser Ser Gly Leu Gly Cys Lys Val
<210> 324
<211> 33
<212> PRT
<213> Homo sapiens
<400> 324
His Gly Asp Gly Ser Phe Ser Asp Glu Met Asn Thr Ile Leu Asp Asn
Leu Ala Ala Arg Asp Phe Ile Asn Trp Leu Ile Gln Thr Lys Ile Thr
                                 25
Asp
<210> 325
<211> 33
<212> PRT
<213> Homo sapiens
<400> 325
His Gly Asp Gly Ser Phe Ser Asp Glu Met Asn Thr Ile Leu Asp Asn
Leu Ala Ala Arg Asp Phe Ile Asn Trp Leu Ile Gln Thr Lys Ile Thr
             20
                                 25
Asp
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<210> 326
<211> 27
<212> PRT
<213> Homo sapiens
<400> 326
His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln
Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu
          20
                                 25
<210> 327
<211> 27
<212> PRT
<213> Homo sapiens
<400> 327
His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln
                                     10
Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu
<210> 328
<211> 38
<212> PRT
<213> Homo sapiens
<400> 328
His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln
Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu Gly Lys Arg Tyr Lys
             20
Gln Arg Val Lys Asn Lys
         35
<210> 329
<211> 38
<212> PRT
<213> Homo sapiens
His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln
```

Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu Gly Lys Arg Tyr Lys 25 .

20

Gln Arg Val Lys Asn Lys 35

<210> 330

<211> 119

<212> PRT

<213> Homo sapiens

<400> 330

His Ser Asp Pro Ala Arg Arg Gly Glu Leu Ser Val Cys Asp Ser Ile

1 5 10 15

Ser Glu Trp Val Thr Ala Ala Asp Lys Lys Thr Ala Val Asp Met Ser 20 25 30

Gly Gly Thr Val Thr Val Leu Glu Lys Val Pro Val Ser Lys Gly Gln
35 40 45

Leu Lys Gln Tyr Phe Tyr Glu Thr Lys Cys Asn Pro Met Gly Tyr Thr 50 60

Lys Glu Gly Cys Arg Gly Ile Asp Lys Arg His Trp Asn Ser Gln Cys 65 70 75 80

Arg Thr Thr Gln Ser Tyr Val Arg Ala Leu Thr Met Asp Ser Lys Lys 85 90 95

Arg Ile Gly Trp Arg Phe Ile Arg Ile Asp Thr Ser Cys Val Cys Thr 100 105 110

Leu Thr Ile Lys Arg Gly Arg 115

<210> 331

<211> 119

<212> PRT

<213> Homo sapiens

<400> 331

His Ser Asp Pro Ala Arg Arg Gly Glu Leu Ser Val Cys Asp Ser Ile
1 5 10 15

Ser Glu Trp Val Thr Ala Ala Asp Lys Lys Thr Ala Val Asp Met Ser 20 25 30

Gly Gly Thr Val Thr Val Leu Glu Lys Val Pro Val Ser Lys Gly Gln 35 40 45

Leu Lys Gln Tyr Phe Tyr Glu Thr Lys Cys Asn Pro Met Gly Tyr Thr 50 60

Lys Glu Gly Cys Arg Gly Ile Asp Lys Arg His Trp Asn Ser Gln Cys

65 70 75 80

Arg Thr Thr Gln Ser Tyr Val Arg Ala Leu Thr Met Asp Ser Lys Lys
85 90 95

Arg Ile Gly Trp Arg Phe Ile Arg Ile Asp Thr Ser Cys Val Cys Thr 100 105 110

Leu Thr Ile Lys Arg Gly Arg 115

<210> 332

<211> 119

<212> PRT

<213> Homo sapiens

<400> 332

His Ser Asp Pro Ala Arg Arg Gly Glu Leu Ser Val Cys Asp Ser Ile

1 5 10 15

Ser Glu Trp Val Thr Ala Ala Asp Lys Lys Thr Ala Val Asp Met Ser 20 25 30

Gly Gly Thr Val Thr Val Leu Glu Lys Val Pro Val Ser Lys Gly Gln 35 40

Leu Lys Gln Tyr Phe Tyr Glu Thr Lys Cys Asn Pro Met Gly Tyr Thr 50 60

Lys Glu Gly Cys Arg Gly Ile Asp Lys Arg His Trp Asn Ser Gln Cys 65 70 75 80

Arg Thr Thr Gln Ser Tyr Val Arg Ala Leu Thr Met Asp Ser Lys Lys 85 90 95

Arg Ile Gly Trp Arg Phe Ile Arg Ile Asp Thr Ser Cys Val Cys Thr 100 \$105\$

Leu Thr Ile Lys Arg Gly Arg 115

<210> 333

<211> 119

<212> PRT

<213> Homo sapiens

<400> 333

His Ser Asp Pro Ala Arg Arg Gly Glu Leu Ser Val Cys Asp Ser Ile
1 5 10

Ser Glu Trp Val Thr Ala Ala Asp Lys Lys Thr Ala Val Asp Met Ser 20 25 30

Gly Gly Thr Val Thr Val Leu Glu Lys Val Pro Val Ser Lys Gly Gln 35 40 45

Leu Lys Gln Tyr Phe Tyr Glu Thr Lys Cys Asn Pro Met Gly Tyr Thr 50 60

Lys Glu Gly Cys Arg Gly Ile Asp Lys Arg His Trp Asn Ser Gln Cys 65 70 75 80

Arg Thr Thr Gln Ser Tyr Val Arg Ala Leu Thr Met Asp Ser Lys Lys 85 90 95

Arg Ile Gly Trp Arg Phe Ile Arg Ile Asp Thr Ser Cys Val Cys Thr 100 105 110

Leu Thr Ile Lys Arg Gly Arg 115

<210> 334

<211> 119

<212> PRT

<213> Homo sapiens

<400> 334

His Ser Asp Pro Ala Arg Arg Gly Glu Leu Ser Val Cys Asp Ser Ile

1 10 15

Ser Glu Trp Val Thr Ala Ala Asp Lys Lys Thr Ala Val Asp Met Ser 20 25 30

Gly Gly Thr Val Thr Val Leu Glu Lys Val Pro Val Ser Lys Gly Gln 35 40

Leu Lys Gln Tyr Phe Tyr Glu Thr Lys Cys Asn Pro Met Gly Tyr Thr 50 60

Lys Glu Gly Cys Arg Gly Ile Asp Lys Arg His Trp Asn Ser Gln Cys 65 70 75 80

Arg Thr Thr Gln Ser Tyr Val Arg Ala Leu Thr Met Asp Ser Lys Lys 85 90 95

Arg Ile Gly Trp Arg Phe Ile Arg Ile Asp Thr Ser Cys Val Cys Thr 100 105 110

Leu Thr Ile Lys Arg Gly Arg 115

<210> 335

<211> 119

<212> PRT

<213> Homo sapiens

<400> 335

His Ser Asp Pro Ala Arg Arg Gly Glu Leu Ser Val Cys Asp Ser Ile

1 5 10 / 15

Ser Glu Trp Val Thr Ala Ala Asp Lys Lys Thr Ala Val Asp Met Ser 20 25 30

Gly Gly Thr Val Thr Val Leu Glu Lys Val Pro Val Ser Lys Gly Gln 35 40 45

Leu Lys Gln Tyr Phe Tyr Glu Thr Lys Cys Asn Pro Met Gly Tyr Thr 50 55 60

Lys Glu Gly Cys Arg Gly Ile Asp Lys Arg His Trp Asn Ser Gln Cys .65 70 75 80

Arg Thr Thr Gln Ser Tyr Val Arg Ala Leu Thr Met Asp Ser Lys Lys 85 90 95

Arg Ile Gly Trp Arg Phe Ile Arg Ile Asp Thr Ser Cys Val Cys Thr 100 105 110

Leu Thr Ile Lys Arg Gly Arg 115

<210> 336

<211> 192

<212> PRT

<213> Homo sapiens

<400> 336

Phe Pro Leu Pro Ala Gly Lys Arg Pro Pro Glu Ala Pro Ala Glu Asp 1 5 10

Asn Met Pro Glu Asp Tyr Pro Asp Gln Phe Asp Asp Val Met Asp Phe 35 40 45

Ile Gln Ala Thr Ile Lys Arg Leu Lys Arg Ser Pro Asp Lys Gln Met 50 55 60

Ala Val Leu Pro Arg Arg Glu Arg Asn Arg Gln Ala Ala Ala Asn 65 70 75 80

Pro Glu Asn Ser Arg Gly Lys Gly Arg Arg Gly Gln Arg Gly Lys Asn 85 90 95

Arg Gly Cys Val Leu Thr Ala Ile His Leu Asn Val Thr Asp Leu Gly
100 105 110

Leu Gly Tyr Glu Thr Lys Glu Glu Leu Ile Phe Arg Tyr Cys Ser Gly
115 120 125

Ser Cys Asp Ala Ala Glu Thr Thr Tyr Asp Lys Ile Leu Lys Asn Leu 130 135 140

Ser Arg Asn Arg Arg Leu Val Ser Asp Lys Val Gly Gln Ala Cys Cys 145 150 155 160

Arg Pro Ile Ala Phe Asp Asp Asp Leu Ser Phe Leu Asp Asp Asn Leu 165 170 175

Val Tyr His Ile Leu Arg Lys His Ser Ala Lys Arg Cys Gly Cys Ile 180 185 190

<210> 337

<211> 192

<212> PRT

<213> Homo sapiens

<400> 337

Phe Pro Leu Pro Ala Gly Lys Arg Pro Pro Glu Ala Pro Ala Glu Asp 1 5 10 15

Arg Ser Leu Gly Arg Arg Ala Pro Phe Ala Leu Ser Ser Asp Ser 20 25 30

Asn Met Pro Glu Asp Tyr Pro Asp Gln Phe Asp Asp Val Met Asp Phe 35 45

Ile Gln Ala Thr Ile Lys Arg Leu Lys Arg Ser Pro Asp Lys Gln Met 50 55 60

Ala Val Leu Pro Arg Arg Glu Arg Asn Arg Gln Ala Ala Ala Asn 65 70 75 80

Pro Glu Asn Ser Arg Gly Lys Gly Arg Gly Gln Arg Gly Lys Asn 85 90 95

Arg Gly Cys Val Leu Thr Ala Ile His Leu Asn Val Thr Asp Leu Gly
100 105 110

Leu Gly Tyr Glu Thr Lys Glu Glu Leu Ile Phe Arg Tyr Cys Ser Gly 115 120 125

Ser Cys Asp Ala Ala Glu Thr Thr Tyr Asp Lys Ile Leu Lys Asn Leu 130 135 140

Ser Arg Asn Arg Arg Leu Val Ser Asp Lys Val Gly Gln Ala Cys Cys 145 150 155 160

Arg Pro Ile Ala Phe Asp Asp Asp Leu Ser Phe Leu Asp Asp Asn Leu 165 170 175

Val Tyr His Ile Leu Arg Lys His Ser Ala Lys Arg Cys Gly Cys Ile

WO 2005/003296

PCT/US2004/001369

180

185

190

<210> 338

<211> 102

<212> PRT

<213> Homo sapiens

<400> 338

Ala Arg Leu Gly Ala Arg Pro Cys Gly Leu Arg Glu Leu Glu Val Arg
1 5 10 15

Val Ser Glu Leu Gly Leu Gly Tyr Ala Ser Asp Glu Thr Val Leu Phe 20 25 30

Gly Leu Arg Arg Leu Arg Gln Arg Arg Arg Leu Arg Arg Glu Arg Val 50 55 60

Arg Ala Gln Pro Cys Cys Arg Pro Thr Ala Tyr Glu Asp Glu Val Ser 65 70 75 80

Phe Leu Asp Ala His Ser Arg Tyr His Thr Val His Glu Leu Ser Ala 85 90 95

Arg Glu Cys Ala Cys Val 100

<210> 339

<211> 102

<212> PRT

<213> Homo sapiens

<400> 339

Ala Arg Leu Gly Ala Arg Pro Cys Gly Leu Arg Glu Leu Glu Val Arg 1 5 10

Val Ser Glu Leu Gly Leu Gly Tyr Ala Ser Asp Glu Thr Val Leu Phe 20 25 30

Arg Tyr Cys Ala Gly Ala Cys Glu Ala Ala Ala Arg Val Tyr Asp Leu  $35 \hspace{1.5cm} 40 \hspace{1.5cm} 45$ 

Gly Leu Arg Arg Leu Arg Gln Arg Arg Arg Leu Arg Arg Glu Arg Val 50 55 60

Arg Ala Gln Pro Cys Cys Arg Pro Thr Ala Tyr Glu Asp Glu Val Ser 65 70 75 80

Phe Leu Asp Ala His Ser Arg Tyr His Thr Val His Glu Leu Ser Ala 85 90 95

Arg Glu Cys Ala Cys Val 100

<210> 340

<211> 119

<212> PRT

<213> Homo sapiens

<400> 340

Tyr Ala Glu His Lys Ser His Arg Gly Glu Tyr Ser Val Cys Asp Ser 1 5 10 15

Glu Ser Leu Trp Val Thr Asp Lys Ser Ser Ala Ile Asp Ile Arg Gly
20 25 30

His Gln Val Thr Val Leu Gly Glu Ile Lys Thr Gly Asn Ser Pro Val 35 40 45

Lys Gln Tyr Phe Tyr Glu Thr Arg Cys Lys Glu Ala Arg Pro Val Lys 50 60

Asn Gly Cys Arg Gly Ile Asp Asp Lys His Trp Asn Ser Gln Cys Lys 65 70 75 80

Thr Ser Gln Thr Tyr Val Arg Ala Leu Thr Ser Glu Asn Asn Lys Leu 85 90 95

Val Gly Trp Arg Trp Ile Arg Ile Asp Thr Ser Cys Val Cys Ala Leu 100 105 110

Ser Arg Lys Ile Gly Arg Thr 115

<210> 341

<211> 119

<212> PRT

<213> Homo sapiens

<400> 341

Tyr Ala Glu His Lys Ser His Arg Gly Glu Tyr Ser Val Cys Asp Ser 1 5 10 15

Glu Ser Leu Trp Val Thr Asp Lys Ser Ser Ala Ile Asp Ile Arg Gly

His Gln Val Thr Val Leu Gly Glu Ile Lys Thr Gly Asn Ser Pro Val

Lys Gln Tyr Phe Tyr Glu Thr Arg Cys Lys Glu Ala Arg Pro Val Lys 50 60

Asn Gly Cys Arg Gly Ile Asp Asp Lys His Trp Asn Ser Gln Cys Lys 65 70 75 80

Thr Ser Gln Thr Tyr Val Arg Ala Leu Thr Ser Glu Asn Asn Lys Leu
85 90 95

Val Gly Trp Arg Trp Ile Arg Ile Asp Thr Ser Cys Val Cys Ala Leu 100 105 110

Ser Arg Lys Ile Gly Arg Thr 115

<210> 342

<211> 135

<212> PRT

<213> Homo sapiens

<400> 342

Trp Gly Pro Asp Ala Arg Gly Val Pro Val Ala Asp Gly Glu Phe Ser

Ser Glu Gln Val Ala Lys Ala Gly Gly Thr Trp Leu Gly Thr His Arg 20 25 30

Pro Leu Ala Arg Leu Arg Arg Ala Leu Ser Gly Pro Cys Gln Leu Trp 35 40 45

Ser Leu Thr Leu Ser Val Ala Glu Leu Gly Leu Gly Tyr Ala Ser Glu 50 55 60

Glu Lys Val Ile Phe Arg Tyr Cys Ala Gly Ser Cys Pro Arg Gly Ala 65 70 75 80

Arg Thr Gln His Gly Leu Ala Leu Ala Arg Leu Gln Gly Gln Gly Arg 85 90 95

Ala His Gly Gly Pro Cys Cys Arg Pro Thr Arg Tyr Thr Asp Val Ala 100 105 110

Phe Leu Asp Asp Arg His Arg Trp Gln Arg Leu Pro Gln Leu Ser Ala 115 120 125

Ala Ala Cys Gly Cys Gly Gly 130 135

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Ser Glu Gln Val Ala Lys Ala Gly Gly Thr Trp Leu Gly Thr His Arg 20 25 30

Pro Leu Ala Arg Leu Arg Arg Ala Leu Ser Gly Pro Cys Gln Leu Trp 35 40 45

Ser Leu Thr Leu Ser Val Ala Glu Leu Gly Leu Gly Tyr Ala Ser Glu
50 60

Glu Lys Val Ile Phe Arg Tyr Cys Ala Gly Ser Cys Pro Arg Gly Ala 65 70 75 80

Arg Thr Gln His Gly Leu Ala Leu Ala Arg Leu Gln Gly Gln Gly Arg 85 90 95

Ala His Gly Gly Pro Cys Cys Arg Pro Thr Arg Tyr Thr Asp Val Ala 100 105 110

Phe Leu Asp Asp Arg His Arg Trp Gln Arg Leu Pro Gln Leu Ser Ala 115 120 125

Ala Ala Cys Gly Cys Gly Gly 130 135

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Arg Trp Cys Ser Gly Arg Ala Arg Arg Pro Pro Pro Gln Pro Ser Arg. 35 40 45

Pro Ala Pro Pro Pro Pro Ala Pro Pro Ser Ala Leu Pro Arg Gly Gly 50 55 60

Arg Ala Ala Arg Ala Gly Gly Pro Gly Ser Arg Ala Arg Ala Ala Gly 65 70 75 80

Ala Arg Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val Arg Ala Leu 85 90 95

Gly Leu Gly His Arg Ser Asp Glu Leu Val Arg Phe Arg Phe Cys Ser 100 105 110

Gly Ser Cys Arg Arg Ala Arg Ser Pro His Asp Leu Ser Leu Ala Ser 115 120 125

Leu Leu Gly Ala Gly Ala Leu Arg Pro Pro Pro Gly Ser Arg Pro Val 130 135 140

Ser Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met 145 155 160

Asp Val Asn Ser Thr Trp Arg Thr Val Asp Arg Leu Ser Ala Thr Ala 165 170 175

Cys Gly Cys Leu Gly 180

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Pro Val Leu Ala Ser Pro Ala Gly His Leu Pro Gly Gly Arg Thr Ala 20 25 30

Arg Trp Cys Ser Gly Arg Ala Arg Arg Pro Pro Pro Gln Pro Ser Arg 35 40 45

Pro Ala Pro Pro Pro Pro Ala Pro Pro Ser Ala Leu Pro Arg Gly Gly 50 55 60

Arg Ala Ala Arg Ala Gly Gly Pro Gly Ser Arg Ala Arg Ala Ala Gly 65 70 75 80

Ala Arg Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val Arg Ala Leu 85 90 95

Gly Leu Gly His Arg Ser Asp Glu Leu Val Arg Phe Arg Phe Cys Ser 100 105 110

Gly Ser Cys Arg Arg Ala Arg Ser Pro His Asp Leu Ser Leu Ala Ser 115 120 125

Leu Leu Gly Ala Gly Ala Leu Arg Pro Pro Pro Gly Ser Arg Pro Val 130 135 140

Ser Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met 145 150 155 160

Asp Val Asn Ser Thr Trp Arg Thr Val Asp Arg Leu Ser Ala Thr Ala 165 170 175

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<213> Homo sapiens

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20 25 30

Arg Trp Cys Ser Gly Arg Ala Arg Arg Pro Pro Pro Gln Pro Ser Arg 35 40 45

Pro Ala Pro Pro Pro Pro Ala Pro Pro Ser Ala Leu Pro Arg Gly Gly 50 60

Arg Ala Arg Ala Gly Gly Pro Gly Ser Arg Ala Arg Ala Ala Gly 65 70 75 80

Ala Arg Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val Arg Ala Leu 85 90 95

Gly Leu Gly His Arg Ser Asp Glu Leu Val Arg Phe Arg Phe Cys Ser 100 105 110

Gly Ser Cys Arg Arg Ala Arg Ser Pro His Asp Leu Ser Leu Ala Ser 115 120 125

Leu Leu Gly Ala Gly Ala Leu Arg Pro Pro Pro Gly Ser Arg Pro Val 130 135 140

Ser Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met 145 150 155 160

Asp Val Asn Ser Thr Trp Arg Thr Val Asp Arg Leu Ser Ala Thr Ala 165 170 175

Cys Gly Cys Leu Gly 180

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Arg Trp Cys Ser Gly Arg Ala Arg Arg Pro Pro Pro Gln Pro Ser Arg 35 40 45

Pro Ala Pro Pro Pro Pro Ala Pro Pro Ser Ala Leu Pro Arg Gly Gly 50 55

Arg Ala Ala Arg Ala Gly Gly Pro Gly Ser Arg Ala Arg Ala Ala Gly 65 70 75 80

Ala Arg Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val Arg Ala Leu 85 90 Gly Leu Gly His Arg Ser Asp Glu Leu Val Arg Phe Arg Phe Cys Ser 100 105 110

Gly Ser Cys Arg Arg Ala Arg Ser Pro His Asp Leu Ser Leu Ala Ser 115 120 125

Leu Leu Gly Ala Gly Ala Leu Arg Pro Pro Pro Gly Ser Arg Pro Val 130 135 140

Ser Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met 145 150 155 160

Asp Val Asn Ser Thr Trp Arg Thr Val Asp Arg Leu Ser Ala Thr Ala 165 170 175

Cys Gly Cys Leu Gly 180

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Arg Trp Cys Ser Gly Arg Ala Arg Arg Pro Pro Pro Gln Pro Ser Arg 35 40 45

Pro Ala Pro Pro Pro Pro Ala Pro Pro Ser Ala Leu Pro Arg Gly Gly 50 55 60

Arg Ala Ala Arg Ala Gly Gly Pro Gly Ser Arg Ala Arg Ala Ala Gly 65 70 75 80

Ala Arg Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val Arg Ala Leu 85 90 95

Gly Leu Gly His Arg Ser Asp Glu Leu Val Arg Phe Arg Phe Cys Ser 100 105 110

Gly Ser Cys Arg Arg Ala Arg Ser Pro His Asp Leu Ser Leu Ala Ser 115 120 125

Leu Leu Gly Ala Gly Ala Leu Arg Pro Pro Pro Gly Ser Arg Pro Val 130 135 140

Ser Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met 145 150 155 160

Asp Val Asn Ser Thr Trp Arg Thr Val Asp Arg Leu Ser Ala Thr Ala

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170

175

Cys Gly Cys Leu Gly 180

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Cys Asp Ala Val Ser Gly Trp Val Thr Asp Arg Arg Thr Ala Val Asp
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Leu Arg Gly Arg Glu Val Glu Val Leu Gly Glu Val Pro Ala Ala Gly 35 40 45

Gly Ser Pro Leu Arg Gln Tyr Phe Phe Glu Thr Arg Cys Lys Ala Asp 50 55 60

Asn Ala Glu Glu Gly Gly Pro Gly Ala Gly Gly Gly Cys Arg Gly 65 70 75 80

Val Asp Arg Arg His Trp Val Ser Glu Cys Lys Ala Lys Gln Ser Tyr 85 90 95

Val Arg Ala Leu Thr Ala Asp Ala Gln Gly Arg Val Gly Trp Arg Trp 100 105 110

Ile Arg Ile Asp Thr Ala Cys Val Cys Thr Leu Leu Ser Arg Thr Gly 115 120 125

Arg Ala 130

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Cys Asp Ala Val Ser Gly Trp Val Thr Asp Arg Arg Thr Ala Val Asp
20 25 30

Leu Arg Gly Arg Glu Val Glu Val Leu Gly Glu Val Pro Ala Ala Gly 35 40 45

Gly Ser Pro Leu Arg Gln Tyr Phe Phe Glu Thr Arg Cys Lys Ala Asp 50 55 60

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Asn Ala Glu Glu Gly Gly Pro Gly Ala Gly Gly Gly Cys Arg Gly
 Val Asp Arg Arg His Trp Val Ser Glu Cys Lys Ala Lys Gln Ser Tyr
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 Val Arg Ala Leu Thr Ala Asp Ala Gln Gly Arg Val Gly Trp Arg Trp
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 Arg Ala
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Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
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Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
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Ala Arg Leu Gln Arg Leu Leu Gln Gly Leu Val
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Ala Arg Leu Gln Arg Leu Leu Gln Gly Leu Val

<210> 356

<211> 120

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<213> Homo sapiens

<400> 356

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Ser Val Ser Val Trp Val Gly Asp Lys Thr Thr Ala Thr Asp Ile Lys 20 25 30

Gly Lys Glu Val Met Val Leu Gly Glu Val Asn Ile Asn Asn Ser Val
35 40

Phe Lys Gln Tyr Phe Phe Glu Thr Lys Cys Arg Asp Pro Asn Pro Val 50 55 60

Asp Ser Gly Cys Arg Gly Ile Asp Ser Lys His Trp Asn Ser Tyr Cys 65 70 75 80

Thr Thr His Thr Phe Val Lys Ala Leu Thr Met Asp Gly Lys Gln 85 90 95

Ala Ala Trp Arg Phe Ile Arg Ile Asp Thr Ala Cys Val Cys Val Leu
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Ser Arg Lys Ala Val Arg Arg Ala 115 120

<210> 357

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Gly Lys Glu Val Met Val Leu Gly Glu Val Asn Ile Asn Asn Ser Val 35 40 45

Phe Lys Gln Tyr Phe Phe Glu Thr Lys Cys Arg Asp Pro Asn Pro Val

50 55 60

Asp Ser Gly Cys Arg Gly Ile Asp Ser Lys His Trp Asn Ser Tyr Cys 65 70 75 80

Thr Thr His Thr Phe Val Lys Ala Leu Thr Met Asp Gly Lys Gln 85 90

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Ser Arg Lys Ala Val Arg Arg Ala 115 120

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Gly Lys Glu Val Met Val Leu Gly Glu Val Asn Ile Asn Asn Ser Val 35 40 45

Phe Lys Gln Tyr Phe Phe Glu Thr Lys Cys Arg Asp Pro Asn Pro Val 50 55 60

Asp Ser Gly Cys Arg Gly Ile Asp Ser Lys His Trp Asn Ser Tyr Cys 65 70 75 80

Thr Thr His Thr Phe Val Lys Ala Leu Thr Met Asp Gly Lys Gln 85 90 95

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Ser Arg Lys Ala Val Arg Arg Ala 115 120

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Ser Val Ser Val Trp Val Gly Asp Lys Thr Thr Ala Thr Asp Ile Lys 20 25 30

Gly Lys Glu Val Met Val Leu Gly Glu Val Asn Ile Asn Asn Ser Val 35 40 45

Phe Lys Gln Tyr Phe Phe Glu Thr Lys Cys Arg Asp Pro Asn Pro Val 50 60

Asp Ser Gly Cys Arg Gly Ile Asp Ser Lys His Trp Asn Ser Tyr Cys 65 70 75 80

Thr Thr Thr His Thr Phe Val Lys Ala Leu Thr Met Asp Gly Lys Gln 85 90 95

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Ser Arg Lys Ala Val Arg Arg Ala 115 120

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His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser 35 40 45

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn 50 60

Arg Asn Asn Ile Ala

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Gln Ala Asp Pro Leu Ser Asp Pro Asp Gln Met Asn Glu Asp Lys Arg 20 25 30

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser 35 40 45

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn

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Arg Asn Asn Ile Ala
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Arg Asn Asn Ile Ala
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Thr	Pro 610	Thr	Leu	Val	Glu	Val 615	Ser	Arg	Asn	Leu	Gly 620	Lys	Val	Gly	Ser
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WO 2005/003296 PCT/US2004/001369

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Mla aa	T	<b>3</b> /	T	T	21-	<b>~1</b>	W-L	<b>3</b>	<b>3</b>	<b>T1</b> a	· ·	T 011	nh -	C	<b>~</b>	
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65	1110	GIII	ב עם	mru	70	****	110	110	vai	75	****	GIU	Mec	110	80	
	_				_							_	_			
Gln	Ile	Phe	Asn	Leu	Phe	Ser	Thr	Lys		Ser	Ser	Ala	Ala		Asp	
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Glu	Thr	Leu	Leu	Asp	Lys	Phe	Tyr	Thr	Glu	Leu	Tyr	Gln	Gln	Leu	Asn	
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X cm	T 011	C1	ת ה	Cys	17-1	710	C1 n	Clv	1753	Clar	17a 3	mb∽	C1	(T)bas	D	•
ASD	Leu	115	ALG	Cys	vai	116	120	GIY	vai	GTA	Val	125	GIU	TIII	PIO	
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Val	Val	Arg	Ala	Glu	Ile	Met	Arg	Ser		Ser	Leu	Ser	Thr		Leu	
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Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp 245 250 255

Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala 260 265 270

Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln 275 280 285

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Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys 305 310 315 320

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Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys 340 345 350

Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu 355 360 365

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Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val 385 390 395 400

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Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu 545 550 555 560

Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys 565 570 575

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Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val 595 600 605

Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His 610 620

Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val 625 630 635 640

Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg 645 650 655

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Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val 545 550 560

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Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser 580 585 590

Val Val Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu 595 600 605

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Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys 675 680 685

Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser 690 695 700

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Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe 740 745 750

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WO 2005/003296

820

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170

WO 2005/003296 PCT/US2004/001369

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- Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu 195 200 205
- Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys 210 225
- Ala Ser, Leu Gln Lys Phe. Gly Glu Arg Ala Phe Lys Ala Trp Ala Val 225 230 235 240
- Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser 245 250 255
- Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly 260 265 270
- Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile 275 280 285
- Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu 290 295 300
- Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp 305 310 315 320
- Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser 325 330 335
- Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly 340 345 350
- Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val 355 360 365
- Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys 370 380
- Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu 385 390 395
- Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys 405 410 415
- Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu 420 425 430
- Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val 435 440 445
- Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His 450 455 460
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485 490 495

Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 500 505 510

Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 515 520 525

Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 530 540

Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 545 550 555 560

Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 570 575

Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 580 585 590

Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly 595 600 605

Leu Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu 610 615 620

Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys 625 630 635 640

Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe 645 650 655

Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile 660 665 670

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr 675 680 685

Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu 690 695 700

Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met 705 710 715 720

Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr 725 730 735

Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val 740 745 750

Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu 755 760 765

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Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys
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Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu
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Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser
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Leu Arg Ser Lys Glu
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Gly	Ser	Arg 35	Arg	Thr	Leu	Met	Leu 40	Leu	Ala	Gln	Met		Arg	Ile	Ser
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Glu	Met	Ile	Gln		Ile	Phe	Asn	Leu		Ser	Thr	Lys	Asp		Ser
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Gln	Gln		Asn	Asp	Leu	Glu		Cys	Val	Ile	Gln		Val	Gly	Val
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	Phe	Gln	Arg	Ile		Leu	Tyr	Leu	Lys		Lys	Lys	Tyr	Ser	
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Cys	Ala	Trp	Glu		Val	Arg	Ala	Glu		Met	Arg	Ser	Phe	Ser	Leu
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Ser	Thr	Asn		Gln	Glu	Ser	Leu	Arg	Ser	Lys	Glu	Asp	Ala	His	Lys
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Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe 210 215 220

Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr 225 230 235 240

Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr 245 250 255

Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr 260 265 270

Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu 275 280 285

Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val 290 295 300

Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu 305 310 315 320

Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr 325 330 335

Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala 340 345 350

Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro 355 360 365

Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln 370 380

Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys 385 390 395 400

Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe 405 410 415

Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu
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Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu 435 440 445

Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys 450 455 460

Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu 465 470 475 480

Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp
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WO 2005/003296 PCT/US2004/001369

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Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp 515 520 525

Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr 530 540

Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys 545 550 550 560

Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile 565 570 575

Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln 580 585 590

Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr 595 600 605

Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys 610 620

Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr 625 630 635 640

Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro 645 650 655

Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg 660 665 670

Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys 675 680 685

Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu 690 700

Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu 705 710 715 720

Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met 725 730 735

Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys 740 745 750

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Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
 65
Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
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Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys
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Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu
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Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
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Gln	Ile	Phe	Asn	Leu 85	Phe	Ser	Thr	Lys	Asp 90	Ser	Ser	Ala	Ala	Trp 95	Asp	
Glu	Thr	Leu	Leu 100	Asp	Lys	Phe	Tyr	Thr 105	Glu	Leu	Tyr	Gln	Gln 110	Leu	Asn	
Asp	Leu	Glu 115	Ala	Cys	Val	Ile	Gln 120	Gly	Val	Gly	Val	Thr 125	Glu	Thr	Pro	
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Ile 145	Thr	Leu	Tyr	Leu	Lys 150	Glu	Lys	Lys	Tyr	Ser 155	Pro	Cys	Ala	Trp	Glu 160	
Val	Val	Arg	Ala	Glu 165	Ile	Met	Arg	Ser	Phe 170	Ser	Leu	Ser	Thr	Asn 175	Leu	
Gln	Glu	Ser	Leu 180	Arg	Ser	Lys	Glu	Asp 185	Ala	His	Lys	Ser	Glu 190	Val	Ala	
His	Arg	Phe 195	Lys	Asp	Leu	Gly	Glu 200	Glu	Asn	Phe	Lys	Ala 205	Leu	Val	Leu	

- Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val 210 215 220
- Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp 225 230 240
- Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp 245 250 255
- Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala 260 265 270
- Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln 275 280 285
- His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val 290 295 300
- Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys 305 310 315 320
- Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro 325 330 335
- Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys 340 345 350
- Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu 355 360 365
- Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys 370 380
- Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val 385 390 395 400
- Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser 405 410 415
- Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly 420 425 430
- Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile 435 440 445
- Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu 450 460
- Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp 465 470 475 480
- Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser 485 490 495
- Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly 500 505 510

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Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu 545 550 560

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Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val 595 600 605

Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His 610 615 620

Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val 625 630 635 640

Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg 645 650 655

Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 660 665 670

Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 675 680 685

Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 690 695 700

Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 705 710 715 720

Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 725 730 735

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Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe 50 55 60
Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu 65 70 75 80
Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu 85 90 95
Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys 100 105 110
Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu 115 120 125
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Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
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Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
                 85
Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
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Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
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Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys
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Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu
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Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 545 550 560

Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 570 575

Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 580 585 590

Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly 595 600 605

Leu Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu 610 620

Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys 625 630 635 640

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Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile 660 665 670

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr 675 680 685

Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu 690 695 700

Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met 705 710 715 720

Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr 725 730 735

Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val 740 745 750

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WO 2005/003296 PCT/US2004/001369

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- Ala Asn Val Tyr His Gln Ile Asn His Leu Lys Thr Val Leu Glu Glu
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- Glu Tyr Ser His Cys Ala Trp Thr Ile Val Arg Val Glu Ile Leu Arg 165 170 175
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- His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn 195 200 205
- Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys 210 225 220
- Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala 225 230 235 240
- Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu 245 250 255
- His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu 260 265 270
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- Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His
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- Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala 435 440 445
- Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys 450 455 460
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  Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys
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WO 2005/003296 PCT/US2004/001369

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Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val

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- Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
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- Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
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- Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln 115 120 125
- His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
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- Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys 145 150 155 160
- Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
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- Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys 180 185 190
- Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu
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- Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys 210 215 220
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- Asp Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile 275 280 285
- Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu 290 295 300
- Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp 305 310 315 320
- Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser 325 330 335
- Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly

340 345

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Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys 370 375 380

Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu 385 390 395 400

Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys
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410
415

Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu 420 425 430

Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val 435 440 445

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Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 500 505 510

Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 515 520 525

Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 530 540

Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 545 550 555 560

Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 570 575

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Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly 595 600 605

Leu Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe 610 620

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Leu Glu Tyr Cys Leu Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu 50 55 60

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Tyr Glu Met Leu Gln Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser 85 90 95

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120

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60

55

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His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val 130 135 140

- Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys 145 150 155 160
- Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro 165 170 175
- Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys 180 185 190
- Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu 195 200 205
- Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys 210 220
- Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val 225 230 230 240
- Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser 245 250 255
- Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly 260 265 270
- Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile 275 280 285
- Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu 290 295 300
- Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp 305 310 320
- Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser 325 330 335
- Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly 340 345 350
- Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val 355 360 365
- Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys 370 375 380
- Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu 385 390 395 400
- Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys
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- Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu 420 425 430

- Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val 435 440 445
- Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His 450 455
- Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val 465 470 475 480
- Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg 485 490 495
- Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 500 505 510
- Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 515 520 525
- Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 530 535 540
- Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 545 550 560
- Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 570 575
- Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 580 585 590
- Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly 595 600 605
- Leu Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe 610 615 620
- Gln Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys 625 630 635 640
- Leu Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu 645 650 655
- Gln Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu 660 665 670
- Gln Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp 675 680 685
- Asn Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile 690 695 700
- Asn His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe 705 710 715 720
- Thr Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly 725 730 735

Arg Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp 745 Thr Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg 760 Leu Thr Gly Tyr Leu Arg Asn <210> 477 <211> 498 <212> DNA <213> Homo sapiens <400> 477 atgagetaca acttgettgg attectacaa agaageagea atttteagtg teagaagete 60 ctgtggcaat tgaatgggag gcttgaatat tgcctcaagg acaggatgaa ctttgacatc 120 cctgaggaga ttaagcagct gcagcagttc cagaaggagg acgccgcatt gaccatctat 180 gagatgctcc agaacatctt tgctattttc agacaagatt catctagcac tggctggaat 240 gagactattg ttgagaacct cctggctaat gtctatcatc agataaacca tctgaagaca 300 gtcctggaag aaaaactgga gaaagaagat ttcaccaggg gaaaactcat gagcagtctg 360 cacctgaaaa gatattatgg gaggattctg cattacctga aggccaagga gtacagtcac 420 tgtgcctgga ccatagtcag agtggaaatc ctaaggaact tttacttcat taacagactt 480 acaggttacc tccgaaac <210> 478 <211> 166 <212> PRT <213> Homo sapiens <400> 478 Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn 70 Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn 85 - 90 His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr

105

Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg

115

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu 150 155 Thr Gly Tyr Leu Arg Asn 165 <210> 479 <211> 772 <212> PRT <213> Homo sapiens <220> <221> MISC\_FEATURE <222> (240) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> MISC\_FEATURE <222> (270) <223> Xaa equals any of the naturally occurring L-amino acids <400> 479 Met Thr Asn Lys Cys Leu Leu Gln Ile Ala Leu Leu Cys Phe Ser Thr Thr Ala Leu Ser Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg 25 Ser Ser Asn Phe Gln Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys 135 Arg Tyr Tyr Gly Arg Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser 155

170

His Cys Ala Trp Thr Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr

165

- Phe Ile Asn Arg Leu Thr Gly Tyr Leu Arg Asn Asp Ala His Lys Ser 180 185 190
- Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala 195 200 205
- Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu 210 215 220
- Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Xaa 225 230 235 240
- Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu 245 250 255
- Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Xaa Tyr Gly
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- Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys 275 280 285
- Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg 290 295 300
- Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr 305 310 315 320
- Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe 325 330 335
- Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe 340 345 350
- Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys 355 360 365
- Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg 370 375 380
- Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala 385 390 395 400
- Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala 405 410 415
- Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys 420 425 430
- Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala 435 440 445
- Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu
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- Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val 465 470 475 480

Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe 485 490 495

Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val 500 505 510

Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr 515 520 525

Ser Val Val Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu 530 535 540

Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val 545 550 555 560

Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys 565 570 575

Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn 580 585 590

Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro 595 600 605

Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys 610 620

Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu 625 630 635 640

Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val 645 650 655

Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg 660 665 670

Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu 675 680 685

Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser 690 695 700

Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val 705 710 715 720

Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp 725 730 735

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Ser Ser Asn Phe Gln Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg
Leu Glu Tyr Cys Leu Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu
Ile Lys Gln Leu Gln Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile
Tyr Glu Met Leu Gln Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser
Ser Thr Gly Trp Asn Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val
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Tyr His Gln Ile Asn His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu
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Lys Glu Asp Phe Thr Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys
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Arg Tyr Tyr Gly Arg Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser
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Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val 50 55 60

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp 65 70 75 80

Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp 85 90 95

Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala 100 105 110

Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln 115 120 125

His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val 130 135 140

Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys 145 150 155 160

Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro 165 170 175

Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys 180 185 190

Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu 195 200 205

Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys 210 225

Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val 225 230 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser 250 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly 265 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys 410 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val 435 440 Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His 455 Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val 470 465 Leu Asn Gln Leu Cys Val Xaa His Glu Lys Thr Pro Val Ser Asp Arg 490 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 505 Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala

Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 535 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 550 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 570 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 585 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly 600 605 Leu Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe 615 Gln Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys 630 Leu Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu 645 650 Gln Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu 665 Gln Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Thr Gly Trp 675 680 Asn Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile 695 Asn His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe 710 Thr Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly 725 730 Arg Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp 745 Thr Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg 760 Leu Thr Gly Tyr Leu Arg Asn <210> 483 <211> 501 <212> DNA <213> Homo sapiens

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gtcctggaag aaaaactgga gaaagaagat ttcaccaggg gaaaactcat gagcagtctg 360
caccigaaaa gatattaigg gaggattcig cattacciga aggccaagga gtacagicac 420
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Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
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Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
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Glu Tyr Cys Leu Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile 50 55 60

Lys Gln Leu Gln Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr 65 70 75 80

Glu Met Leu Gln Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser 90 95

Thr Gly Trp Asn Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr 100 105 110

His Gln Ile Asn His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys 115 120 125

Glu Asp Phe Thr Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg 130 135 140

Tyr Tyr Gly Arg Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His 145 150 155 160

Cys Ala Trp Thr Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe 165 170 175

Ile Asn Arg Leu Thr Gly Tyr Leu Arg Asn Asp Ala His Lys Ser Glu 180 185 190

Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu 195 200 205

Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp 210 215 220

His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val 225 230 235 240

Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe 245 250 255

Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu 260 265 270

Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe 275 280 285

Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro 290 295 300

Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe 305 310 315 320

Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr

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Val	Val 530	Leu	Leu	Leu	Arg	Leu 535	Ala	Lys	Thr	Tyr	Glu 540	Thr	Thr	Leu	Glu
Lys 545	Cys	Cys	Ala	Ala	Ala 550	Asp	Pro	His	Glu	Cys. 555	Tyr	Ala	Lys	Val	Phe 560
Asp	Glu	Phe	Lys	Pro 565	Leu	Val	Glu	Glu	Pro 570	Gln	Asn	Leu	Ile	Lys 575	Gln
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Leu	Val 610	Glu	Val	Ser	Arg	Asn 615	Leu	Gly	Lys	Val	Gly 620	Ser	Lys	Cys	Cys
Lys	His	Pro	Glu	Ala	Lys	Arg	Met	Pro	Суѕ	Ala	Glu	Asp	Tyr	Leu	Ser

023					630		•			635					640	
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Asp	Arg	Val	Thr 660	Lys	Cys	Cys	Thr	Glu 665	Ser	Leu	Val	Asn	Arg 670	_	Pro	
Cys	Phe	Ser 675	Ala	Leu	Glu	Val	Asp 680	Glu	Thr	Tyr	Val	Pro 685	Lys	Glu	Phe	
Asn	Ala 690	Glu	Thr	Phe	Thr	Phe 695	His	Ala	Asp	Ile	Cys 700	Thr	Leu	Ser	Glu	
Lys 705	Glu	Arg	Gln	Ile	Lys 710	Lys	Gln	Thr	Ala	Leu 715	Val	Glu	Leu	Val	Lys 720	
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Thr Gly Trp Asn Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr 100 105 110

His	Gln	11e 115	Asn	His	Leu	Lys	Thr 120	Val	Leu	Glu	Glu	Lys 125	Leu	Glu	Lys
	Asp 130	Phe	Thr	Arg	Gly	Lys 135	Leu	Met	Ser	Ser	Leu 140	His	Leu	Lys	Arg
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Cys	Ala	Trp	Thr	Ile 165	Val	Arg	Val	Glu	Ile 170	Leu	Arg	Asn	Phe	Tyr 175	Phe
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Ala	Pro	Glu	Leu 340		Phe	Phe	Ala	Lys 345	Arg	Tyr	Lys	Ala	Ala 350	Phe	Thr
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Ala	Val	Ala	Arg	Leu 405		Gln	Arg	Phe	Pro 410		Ala	Glu	Phe	Ala 415	Glu

Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys 425 His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys 455 Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu 470 Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe 505 Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser 520 Val Val Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu 535 Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln 570 Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys . 615 Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser 630 Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro 665 Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe

Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu

Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys

695

710

730

60 120

180

240

300 360

420

480 540

561

His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp

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Tyr His Gln Ile Asn His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu 115 120 125

Lys Glu Asp Phe Thr Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys 130 135 140

Arg Tyr Tyr Gly Arg Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser 145 150 155 160

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Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr 35 40 45

Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val 50 60

Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys 65 70 75 80

Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala 85 90 95

Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln 100 105 110

Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asn Pro 115 120 125

Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala 130 135 140

Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile 145 150 155 160

Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala 165 170 175

Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys 180 185 190

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Gl <sub>3</sub> 225	g Glu	Arg	Ala	Phe	Lys 230	Ala	Trp	Ala	Val	Ala 235	Arg	Leu	Ser	Gln	Arg 240
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Gl	u Pro	Gln	Asn	Leu 405	Ile	Lys	Gln	Asn	Cys 410	Glu	Leu	Phe	Glu	Gln 415	Leu
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Pr 46	o Cys 5	Ala	Glu	Asp	Tyr 470		Ser	Val	Val	Leu 475	Asn	Gln	Leu	Суз	Val 480
Le	u His	Glu	Lys	Thr 485		Val	Ser	Asp	Arg 490		Thr	Lys	Cys	Cys 495	Thr

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Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
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Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
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Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
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Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
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Thr	Lys	Val	His 260		Glu	Суѕ	Cys	His 265	_	Asp	Leu	Leu	Glu 270	Cys	Ala
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Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys 580 585 585

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Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln Cys Gln Lys Leu Leu

615

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Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn Glu Thr Ile Val Glu
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Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr Arg Gly Lys Leu Met
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Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg Ile Leu His Tyr Leu
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Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln

100

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Tyr	Ala	Glu	Ala 340	Lys	Asp	Val	Phe	Leu 345		Met	Phe	Leu	Tyr 350	Glu	Tyr
Ala	Arg	Arg 355		Pro	Asp	Тут	Ser 360		Val	Leu	Leu	Leu 365		Leu	Ala
Lys	Thr 370	-	Glu	Thr	Thr	Leu 375		Lys	Суз	Cys	Ala 380		Ala	Asp	Pro
His 385		Cys	Tyr	Ala	Lys 390		Phe	Asp	Glu	Phe 395		Pro	Leu	Val	Glu 400
Glu	Pro	Gln	Asn	Leu 405		Lys	Gln	Asn	Cys 410		Leu	Phe	Glu	Gln 415	Leu

GIY	GIU	ıyı	420	2110	<b>U</b> 211			425				-2-	430	-3-	
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Pro 465	Сув	Ala	Glu		Tyr 470	Leu	Ser	Val	Val	Leu 475	Asn	Gln	Leu	Cys	Val 480
Leu	His	Glu	Lys	Thr 485	Pro	Va1	Ser	Asp	Arg 490	Val	Thr	Lys	Cys	Cys 495	Thr
G1u	Ser	Leu	Val .500	Asn	Arg	Arg	Pro	Cys 505		Ser	Ala	Leu	Glu 510	Val	Asp
Glu	Thr	Tyr 515	Val	Pro	Lys	Glu	Phe 520	Asn	Ala	Glu	Thr	Phe 525	Thr	Phe	His
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Thr 545	Ala	Leu	Val	Glu	Leu 550	Val	Lys	His	Lys	Pro 555	Lys	Ala	Thr	Lys	Glu 560
Gln	Leu	Lys	Ala	<b>Val</b> 565		Asp	Asp	Phe	Ala 570		Phe	Va1	Glu	<b>Lys</b> 575	
Cys	Lys	Ala	Asp 580	Asp	Lys	Glu	Thr	Суs 585		Ala	Glu	Glu	Gly 590		Lys
Leu	Val	Ala 595	Ala	Ser	Gln	Ala	Ala 600		Gly	Leu	Met	Ser 605		Asn	Leu
Leu	Gly 610		Leu	Gln	Arg	Ser 615		Asn	Phe	Gln	Суs 620		Lys	Leu	Leu
Trp 625		Leu	Asn	Gly	Arg 630		Glu	Тут	Cys	Leu 635		Asp	Arg	Met	Asn 640
Phe	Asp	Ile	Pro	Glu 645		Ile	Lys	Gln	Leu 650		Gln	Phe	Gln	<b>Lys</b> 655	
Asp	Ala	Ala	Leu 660		Ile	Tyr	Glu	Met 665		Gln	Asn	Ile	Phe 670		Ile
Phe	Arg	Gln 675	Asp	Ser	Ser	Ser	Thr 680		Trp	Asn	Glu	Thr 685		Val	Glu

Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn His Leu Lys Thr Val

Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr Arg Gly Lys Leu Met 705 710 735 745 759

695

Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg Ile Leu His Tyr Leu

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Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
His Leu Lys Thr Val Leu Glu Clu Lys Leu Glu Lys Glu Asp Phe Thr
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WO 2005/003296

115 120 125

Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr 130 135 140

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Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
50 55 60

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp 65 70 75 80

Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp 85 90 95

Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala 100 105 110

Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln 115 120 125

His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val 130 135 140

Asp Val Met Cys Thr Ala Phe: His Asp Asn Glu Glu Thr Phe Leu Lys 145 150 155 160

Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro 165 170 175

Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys 180 185 190

Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu 195 200 205

Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys

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Lys	Leu	Val	Thr 260	Asp	Leu	Thr	Lys	Val 265	His	Thr	Glu	Cys	Cys 270	His	Gly
Asp	Leu	Leu 275	Glų	Cys	Ala	Asp	Asp 280	Arg	Ala	Asp	Leu	Ala 285	Lys	Tyr	Ile
Cys	Glu 290	Asn	Gln	Asp	Ser	Ile 295	Ser	Ser	Lys	Leu	Lys 300	Glu	Сув	Cys	Glu
Lys 305	Pro	Leu	Leu	Glu	Lys 310	Ser	His	Суѕ	Ile	Ala 315	Glu	Val	Glu	Asn	Asp 320
Glu	Met	Pro		Asp 325	Leu	Pro	Ser	Leu	Ala 330	Ala	Asp	Phe	Val	Glu 335	Ser
Lys	Asp	Val	Cys 340	Lys	Asn	Tyr	Ala	Glu 345	Ala	Lys	Asp	Val	Phe 350	Leu	Gly
Met	Phe	Leu 355	Tyr	Glu	Тут	Ala	Arg 360	Arg	His	Pro	Asp	Tyr 365	Ser	Val	Val
Leu 	Leu 370	Leu	Arg	Leu	Ala	Lys 375	Thr	Tyr	Glu	Thr	Thr 380	Leu	Glu	Lys	Cys
Суs 385	Ala	Ala	Ala	Asp	Pro 390	His	Glu	Cys	Tyr	Ala 395	Lys	Val	Phe	Asp	Glu 400
Phe	Lys	Pro	Leu	Val 405	Glu	Glu	Pro	Gln	Asn 410		Ile	Lys	Gln	Asn 415	Cys
Glu	Leu	Phe	Glu 420	Gln	Leu	Gly	Glu	Tyr 425	Lys	Phe	Gln	Asn	Ala 430	Leu	Leu
Val	Arg	Tyr 435	Thr	Lys	Lys	Val	Pro 440	Gln	Val	Ser	Thr	Pro 445	Thr	Leu	Val
Glu	Val 450	Ser	Arg	Asn	Leu	Gly 455		Val	Gly	Ser	Lys 460		Cys	Lys	His
Pro 465	Glu	Ala	Lys	Arg	Met 470	Pro	Cys	Ala	Glu	Asp 475	Tyr	Leu	Ser	Val	Val 480
Leu	Asn	Gln	Leu	Cys 485	Val	Leu	His	Glu	Lys 490		Pro	Val	Ser	Asp 495	Arg
Val	Thr	Lys	Cys 500	Cys	Thr	Glu	Ser	Leu 505	Val	Asn	Arg	Arg	Pro 510		Phe
Ser	Ala	Leu	Glu	Val	Asp	Glu	Thr	Tyr	Val	Pro	Lys	Glu	Phe	Asn	Ala

515 520 525

Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 530 535 540

Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 545 550 555 560

Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 570 575

Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 580 585 590

Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly 595 600 605

Leu Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu 610 615 620

Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys 625 630 635 640

Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe 645 650 655

Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile 660 665 670

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr 675 680 685

Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu 690 695 700

Glu Ala Cys Val Met Gln Glu Glu Arg Val Gly Glu Thr Pro Leu Met 705 710 715 720

Asn Ala Asp Ser Ile Leu Ala Val Lys Lys Tyr Phe Arg Arg Ile Thr 725 730 735

Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val 740 745 750

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Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
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Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys

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	A1 22	a <i>S</i> € 5	r	Leu	ı Gl	n Ly	s Ph 23	e G1	y Gl	u Ar	g Al	a Ph	e Ly: 5	s Al	a Trj	o Al	a Va 24
•	Al	a Ar	g	Leu	ı Se:	r G1 24	n Ar 5	g Ph	e Pro	o Ly:	s Ala 25	a Gl	u Phe	e Ala	a Gla	u Va 25.	
	Ly	s Le	u	Val	260	r As	p Le	u Thi	r Ly:	s Va: 269	l Hi:	s Th	r Glı	ı Cys	5 Cys 27(		s Gl
	Ası	o Le	u :	Leu 275	Glu	ı Cy	s Al	a As <u>ı</u>	280	o Arg	g Ala	a Asp	) Lev	1 Ala 285		тул	r Il
	Суз	s G1 29	ս : 0	Asn	Glr	n Asj	o Se	r Ile 295	e Ser	Ser	: Lys	s Lev	1 Lys 300	Glu	Cys	Cy:	s Gl
	303	,					311					315	,				320
	Glu	ı Me	t 1	Pro	Ala	Ası 325	Let	ı Pro	Ser	Leu	330	a Ala	Asp	Phe	Val	G1u 335	
					340	,		тут		345	•				350		
	•		-	,,,				Ala	360	l				365			
	Leu	37(	1 I )	Leu	Arg	Leu	Ala	1 Lys 375	Thr	Tyr	Glu	Thr	Thr 380	Leu	Glu	Lys	Суз
:	Cys 385	Ala	ı A	la	Ala	Asp	970 390	His	Glu	Cys	Tyr	Ala 395	Lys	Val	Phe	Asp	Glu 400
1	Phe	Lys	P	ro	Leu	Val 405	Glu	Glu	Pro	Gln	Asn 410	Leu	Ile	Lys	Gln	Asn 415	
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V	al	Thr	L	ys (	Cys 500	Cys	Thr	Glu	Ser	Leu 505	Val	Asn	Arg		Pro 510	Cys	Phe
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515

-520

525

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Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 545 550 555 560

Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 570 575

Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 580 585 590

Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly 595 600 605

Leu Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu 610 620

Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys 625 635 640

Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe 645 650 655

Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile 660 665 670

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr 675 680 685

Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu 690 695 700

Glu Ser Cys Val Met Gln Glu Val Gly Val Ile Glu Ser Pro Leu Met 705 710 715 720

Tyr Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr 725 730 735

Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Ser Cys Ala Trp Glu Val Val 740 755 750

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Tyr	Ser	Arg	Ser 20	Leu	Asp	Lys	Arg	Asp 25	Ala	His	Lys	Ser	Glu 30	Val	Ala	
His	Arg	Phe 35	Lys	Asp	Leu	Gly	Glu 40	Glu	Asn	Phe	Lys	Ala 45	Leu	Val	Leu .	
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Lys 65	Leu	Val	Asn	Glu	Val 70	Thr	Glu	Phe	Ala	Lys 75	Thr	Суѕ	Val	Ala	Asp 80	
Glu	Ser	Ala	Glu	Asn 85	Cys	Asp	Lys	Ser	Leu 90	His	Thr	Leu	Phe	Gly 95	Asp	
Lys	Leu	Cys	Thr 100	Val	Ala	Thr	Leu	Arg 105	Glu	Thr	Tyr	Gly	Glu 110	Met	Ala	
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His	130	Asp	Asp	Asn	Pro	Asn 135	Leu	Pro	Arg	Leu	Val 140	Arg	Pro	Glu	Val	÷
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Cys	Gln	Ala 195	Ala	Asp	Lys	Ala	Ala 200	Cys	Leu	Leu	Pro	Lys 205	Leu	Asp	Glu	
		•	<b>03</b>		•					_				_		

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Ala	Glu	Glu 595	Gly	Lys	Lys	Leu	Val 600	Ala	Ala	Ser	Gln	Ala 605	Ala	Leu	Gly
Leu	Cys 610	Asp	Leu	Pro	Gln	Thr 615	His	Ser	Leu		Ser 620	Arg	Arg	Thr	Leu
Met 625	Leu	Leu	Ala	Gln	Met 630	Arg	Arg	Ile	Ser	Leu 635		Ser	Суѕ	Leu	Lys 640
Asp	Arg	His	Asp	Phe 645	Gly	Phe	Pro	Gln	Glu 650	Glu	Phe	Gly	Asn	Gln 655	Phe
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Phe	Asn	Leu 675	Phe	Ser	Thr	Lys	Asp 680	Ser	Ser	Ala	Ala	Trp 685	Asp	Glu	Thr
Leu	Leu 690	_	Lys	Phe	Tyr	Thr 695	Glu	Leu	Tyr	Gln	Gln 700	Leu	Asn	Asp	Met
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Asn	Val	Asp	Ser	Ile 725		Ala	Val	Lys	Lys 730		Phe	Gln	Arg	Ile 735	Thr
Leu	Tyr	Leu	Thr 740	Glu	Lys	Lys	Туг	Ser 745		Cys	Ala	Trp	Glu 750	Val	Val
Arg	Ala	Glu 755	Ile	Met	Arg	Ser	Phe 760	Ser	Leu	Ser	Lys	11e 765	Phe	Gln	Glu .
Arg	Leu 770		Arg	Lys	, Glu										
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Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
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Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
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Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met Asn
Val Asp Ser Ile Leu Ala Val Lys Lys Tyr Phe Gln Arg Ile Thr Leu
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Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys

Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val 230 235 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser 250 245 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly 265 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile 280 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu 295 Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp 310 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser 325 330 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly 345 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val 470 Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg'Arg Pro Cys Phe 500 505 510

Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 515 520 525

Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 530 540

Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 545 550 555 560

Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 570 575

Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 580 585 590

Ala Glu Glu Gly Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
595 600 605

Leu Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu 610 615 620

Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys 625 630 635 640

Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe 645 650 655

Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile 660 665 670

Phe Asn Leu Phe Thr Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Asp 675 680 685

Leu Leu Asp Lys Phe Cys Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu 690 695 700

Glu Ala Cys Val Met Gln Glu Glu Arg Val Gly Glu Thr Pro Leu Met 705 710 715 720

Asn Ala Asp Ser Ile Leu Ala Val Lys Lys Tyr Phe Arg Arg Ile Thr 725 730 735

Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val 740 745 750

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Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
Asn Leu Phe Thr Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Asp Leu
Leu Asp Lys Phe Cys Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
Ala Cys Val Met Gln Glu Glu Arg Val Gly Glu Thr Pro Leu Met Asn
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Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
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Leu Arg Arg Lys Glu
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Asp	Leu	Leu 275	Glu	Cys	Ala	Asp	Asp 280	Arg	Ala	Asp	Leu	Ala 285	Lys	Tyr	Ile
Cys	Glu 290	Asn	Gln	Asp	Ser	Ile 295	Ser	Ser	Lys	Leu	Lys 300	Glu	Cys	Суѕ	Glu
Lys 305	Pro	Leu	Leu		Lys 310	Ser	His	Cys	Ile	Ala 315	Glu	Val	Glu	Asn	Asp 320
Glu	Met	Pro	Ala	Asp 325	Leu	Pro	Ser	Leu	Ala 330	Ala	Asp	Phe	Val	Glu 335	Ser
Lys	Asp	Val	Cys 340	Lys	Asn	Tyr	Ala	Glu 345	Ala	Lys	Asp	Val	Phe 350	Leu	Gly
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Cys 385	Ala	Ala	Ala	Asp	Pro 390	His	Glu	Суѕ	Tyr	Ala 395	Lys	Val	Phe	Asp	Glu 400
Phe	Lys	Pro	Leu	Val 405	Glu	Glu	Pro	Gln	Asn 410	Leu	Ile	Lys	Gln	Asn 415	Cys
Glu	Leu	Phe	Glu 420	Gln	Leu	Gly	Glu	Tyr 425	Lys	Phe	Gln	Asn	Ala 430	Leu	Leu
Val	Arg	Tyr 435	Thr	Lys	Lys	Val	Pro 440	Gln	Val	Ser	Thr	Pro 445	Thr	Leu	Val
Glu	Val 450		Arg	Asn	Leu	Gly 455	Lys	Val	Gly	Ser	Lys 460	Cys	Cys	Lys	His
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Ser	Ala	Leu 515	Glu	Val	Asp	Glu	Thr 520	Tyr	Val	Pro	Lys	Glu 525	Phe	Asn	Ala
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PCT/US2004/001369 WO 2005/003296

Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 550 555 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 570 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 585 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu 610 615 Met Leu Leu Ala Gln Met Arg Lys Ile Ser Leu Phe Ser Cys Leu Lys 630 Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe 645 Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu 690 Glu Ala Cys Val Met Gln Glu Glu Arg Val Gly Glu Thr Pro Leu Met 715 Asn Val Asp Ser Ile Leu Ala Val Lys Lys Tyr Phe Arg Arg Ile Thr Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val 745 Arg Ala Glu Ile Met Arg Ser Leu Ser Leu Ser Thr Asn Leu Gln Glu 760 Arg Leu Arg Arg Lys Glu .770 <210> 521 <211> 495 <212> DNA

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caggaggaga gggtgggaga aactcccctg atgaatgcgg actccatctt ggctgtgaag 360 aaatacttcc gaagaatcac tctctatctg acagagaaga aatacagccc ttgtgcctgg 420 gaggttgtca gagcagaaat catgagatcc ctctctttat caacaaactt gcaagaaaga 480 ttaaggagga aggaa <210> 522 <211> 165 <212> PRT <213> Homo sapiens <400> 522 Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln 40 Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu Ala Cys Val Met Gln Glu Glu Arg Val Gly Glu Thr Pro Leu Met Asn 105 Ala Asp Ser Ile Leu Ala Val Lys Lys Tyr Phe Arg Arg Ile Thr Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Leu Ser Leu Ser Thr Asn Leu Gln Glu Arg 150 Leu Arg Arg Lys Glu <210> 523 <211> 21 <212> DNA <213> Homo sapiens <400> 523 21 agaagtgctg caaggctgac g <210> 524

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Lys Thr Gln Leu Gln Leu Glu His Leu Leu Leu Asp Leu Gln Met Ile 35 40 45

Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys Leu Thr Arg Met Leu 50 60

Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys His Leu 65 70 75 80

Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu Glu Val Leu Asn Leu 85 90 95

Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg Asp Leu Ile Ser Asn 100 105 110

Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met
115 120 125

Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val Glu Phe Leu Asn Arg 130 135 140

Trp Ile Thr Phe Ser Gln Ser Ile Ile Ser Thr Leu Thr Asp Ala His 145 150 155 160

Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe 165 170 175

Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro 180 185 190

Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys 195 200 205

Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His 210 215 220

Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr 225 230 235 240

Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn

255 245 250 Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu 265 Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu 280 Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro 295 Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr 390 Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala 455 Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys 470 Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr 500 505 510 Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala 520 Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu

Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe

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Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp 595 600 605	
Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr 610 615 620	
Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn 625 630 635 640	
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Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp 705 710 715 720	
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Asn Asn Tyr Lys Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe 50 55 60

Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu 65 70 75 80

Glu Glu Leu Lys Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys 85 90 95

Asn Phe His Leu Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile 100 105 110

Val Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala 115 120 125

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Cys Gln Ser Ile Ile Ser Thr Leu Thr

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His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu 35 40 45

Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val $50 \hspace{1.5cm} 55 \hspace{1.5cm} 60$ 

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp 65 70 75 80

Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp 85 90 95

Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln 120 His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro 170 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys 215 Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val 235 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser 245 250 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly 265 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile 280 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu 295 Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser

Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly

Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val

Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys

Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu

375

345

. 340

Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala

395

(1)

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Ala	Glu	Glu 595	Gly	Lys	Lys	Leu	Val 600	Ala	Ala	Ser	Gln	Ala 605	Ala	Leu	Gly
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His 625	Leu	Leu	Leu	Asp	Leu 630	Gln	Met	Ile	Leu	Asn 635	Gly	Ile	Asn	Asn	Tyr 640
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Lys	Lys		Thr 660	Glu	Leu	Lys	His	Leu 665		Cys	Leu	Glu	Glu 670	Glu	Leu
Lys	Pro	Leu 675	Glu	Glu	Val	Leu	Asn 680	Leu	Ala	Gln	Ser	Lys 685	Asn	Phe	His
Leu	Arg 690	Pro	Arg	Asp	Leu	Ile 695	Ser	Asn	Ile	Asn	Val 700	Ile	Va1	Leu	Glu

Leu Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser 730 Ile Ile Ser Thr Leu Thr 740 <210> 529 <211> 462 <212> DNA <213> Homo sapiens <400> 529 atgtacagga tgcaactcct gtcttgcatt gcactaagtc ttgcacttgt cacaaacagt 60 gcacctactt caagttctac aaagaaaaca cagctacaac tggagcattt actgctggat 120 ttacagatga ttttgaatgg aattaataat tacaagaatc ccaaactcac caggatgctc 180 acatttaagt tttacatgcc caagaaggcc acagaactga aacatcttca gtgtctagaa 240 gaagaactca aacctctgga ggaagtgcta aatttagctc aaagcaaaaa ctttcactta 300 360 agacccaggg acttaatcag caatatcaac gtaatagttc tggaactaaa gggatctgaa acaacattca tgtgtgaata tgctgatgag acagcaacca ttgtagaatt tctgaacaga 420 462 tggattacct tttgtcaaag catcatctca acactgactt ga <210> 530 <211> 153 <212> PRT <213> Homo sapiens <400> 530 Met Tyr Arg Met Gln Leu Leu Ser Cys Ile Ala Leu Ser Leu Ala Leu Val Thr Asn Ser Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu 25 Gln Leu Glu His Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile 105 Val Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe 130